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Les différents projets de recherche subventionnés ou commandités durant l'année universitaire 1990-1991 à l'université Concordia sont répertoriés dans ce document. Après une présentation des statistiques de recherche et des différents centres de recherche de l'université, les projets sont regroupés par faculté avec mention des renseignements suivants : le nom du responsable du projet, le titre du projet, le nom de l'organisme subventionnaire et le type de subvention accordé.

Type de document :

DIRECTORY OF FUNDED RESEARCH ACTIVITIES

1990-91

OFFICE OF RESEARCH SERVICES

Concordia
UNIVERSITY

REAL EDUCATION FOR THE REAL WORLD

With approximately 26,000 students, 4,400 faculty and staff, and more than 60,000 alumni worldwide, Montreal's Concordia University is one of Canada's largest and most dynamic centres of higher learning.

Students can choose from 160 undergraduate and graduate programmes in four Faculties: Commerce and Administration, Fine Arts, Engineering and Computer Science, and Arts and Science. Integrated within the Faculties are seven colleges and more than a dozen specialized research centres.

From its two founding institutions — Loyola College (1896) and Sir George Williams University (1873) — Concordia has inherited a tradition of superior teaching supported by the best possible scholarship, creative activity, research and service to society. Each year the University awards more than 3,600 degrees and diplomas.

Although the majority of its students are recent CEGEP graduates, Concordia maintains an openness to part-time studies, flexible class schedules and an interdisciplinary approach to learning for women and men of all ages and backgrounds. In fact, we are recognized as having one of Canada's most welcoming open-door policies towards senior students (those aged 55 and over).

The University has two campuses: Sir George Williams, downtown, with 38 buildings spread over 11 city blocks, and Loyola, about 7 kilometres away in a residential setting on 46 acres in west-end Montreal. That campus has 31 buildings.

Concordia's hallmark has always been community involvement. Many of the part-time faculty are professionals drawn from the artistic community and the business world. The full-time faculty are engaged in a wide range of social, cultural and economic endeavours that help to enrich the lives of people in Montreal, across Canada and abroad.

Ever-responsive to Montreal's bilingual and multicultural environment, Concordia continues to offer a wide range of community services from business and professional seminars to cultural and recreational activities. In financial terms, the research grants allocated to Concordia have increased enormously during the 17 years since the University was established, up from $1 million in 1974 to $15.7 million this past year.

DIRECTORY OF FUNDED RESEARCH ACTIVITIES 1990-91

Additional information concerning
Concordia's research activities available from:

Office of Research Services
CONCORDIA UNIVERSITY
1455 de Maisonneuve Blvd. W.
Montreal, Quebec
H3G 1M8

This edition of the Directory is being dedicated to Lorraine Boyce, Assistant to the Director of Research Services, who will be retiring this Spring, in recognition of her eighteen years of committed service to the Concordia research community.

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This issue ushers in our Fourth Edition of the Directory of Funded Research Activities at Concordia University and highlights the funded research and scholarly accomplishments of our faculties. We are proud of the accomplishments and advances that our researchers have made in spite of the difficult funding cutbacks. We continue to be optimistic that new and innovative forms of research funding are on the horizon. The introduction of two new sources of internal funding (The Seagram Fund for Academic Innovation and The Faculty Research Development Programme) initiated during the past year for seed funding for new researchers and for innovative projects are providing a stimulus and will have far-reaching effects for Concordia researchers.

In addition, the Industrial Liaison Office has been most active in facilitating the transfer of knowledge and technology from the University to the industrial and government communities.

We continue to highlight Concordia centres with a description of five further research units. The listing of research interests provided in last year's Directory will be published in a separate document on an interim basis.

This year (consistent with the new reporting structure required by the Quebec Ministry of Education), we have included all projects where Concordia faculty are co-researchers at other Universities. The statistical information (pages 8-11) which reflects the cooperation between Concordia and other institutions must be considered approximate but relatively accurate as the definitive totals are awaiting final government approval. The Principal Investigator for the project is underlined when located at another institution.

The Office of Research Services wishes to acknowledge the support and encouragement of Dr. Jack Lightstone, Associate Vice-Rector Academic (Research) who is completing his three-year mandate and will be taking a Leave of Absence before returning to the Department of Religion.

Anyone wishing further information regarding any of the projects listed in the Directory should contact the Office of Research Services.

ACKNOWLEDGMENT

To Christine Tawtel whose interest and dedication has once more made the Directory a reality. We would be remiss if we did not acknowledge the assistance of the staff of both the Public Relations and Marketing Communications departments. ■

Audrey J. Williams, Director
Office of Research Services

The academic year 1990-91 represents a year of significant development and milestone events for research at Concordia University.

In 1989, the Montreal-based Seagram Company Ltd. announced that it would contribute $1 million in research funding to Concordia University. The University established the Seagram Fund for Academic Innovation which disbursed its first grants in 1990-91 in support of innovative projects and programmes to help the University build on its own special strengths. The Fund provided seed money for interdisciplinary projects involving research, creative activity or academic development. The criteria included: excellence, interdisciplinarity, national importance, and the potential for obtaining external support at the end of the award period.

In addition, 1990-91 marks the first year of operation of Concordia's Faculty Research Development Programme (FRDP). The FRDP was established upon the recommendation of the University Senate, and on that basis was deemed a budgetary priority in the assignment of new funds for academic development under the University's operating budget. The FRDP's three constituent grant programmes are intended to serve two distinct groups: those who wish to commence or recommence their research after a number of years of inactivity in this domain; researchers who wish to significantly reorient their sphere of research activity so as to better situate themselves at the leading edge of an area of inquiry; new faculty who are about to commence their research careers at Concordia University. The FRDP's programme for new researchers is especially significant, because it is intended to do more than supply seed money to those commencing their research activities at Concordia. New researchers are awarded multi-year operating grants on the basis of fully articulated proposals, subjected to independent peer assessment, the substance of which is reported to the applicant. Second year and third year instalments are awarded on the basis of progress reports, outlining external research achievements and attempts to secure external funding.

As a result of these provisions, it is expected that the FRDP will be a powerful in-house mechanism for socializing new researchers into those spheres of activity which will facilitate the development of active and productive research programmes by these new faculty. As Concordia will hire many new faculty over the next decade to fill positions open due to retirement, the FRDP will, it is hoped, play an increasingly important role in the development of research at Concordia University.

The academic year 1990-91 saw as well the adoption by the University Senate of a document outlining policies, principles and priorities for initiatives aimed at the enhancement of research at Concordia. This represents the first such document to be adopted by the University. The document's recommendations are founded upon an understanding of the role played by supportive human and material environments in the enhancement of an individual's research endeavours. As the document's recommendations are implemented over the years to come, it is expected that the pace of development of research by individuals at Concordia will be significantly advanced.

The close of 1990-91 marks a special moment in the support of research activity at Concordia University. March 1, 1991 was the twentieth anniversary of the Office of Research Services. Its founding Director, Ms. Audrey J. Williams, and the entire staff of the ORS have a well-deserved reputation for service to the University's researchers. They have been tireless and devoted in their service to others, and the ORS is now considered by all to be an indispensible, high-quality operation. Indeed, it enjoys a superior reputation across the country. I am sure that I express the sentiments of all members of the University community in expressing gratitude to Ms. Williams and her staff on the occasion of the Office's twentieth anniversary. ■

■
Jack N. Lightstone
Associate Vice-Rector, Academic
(Research)

This edition of the Directory marks the 20th anniversary of the Office of Research Services. It also marks 20 years of my own leadership. With this in mind, I would like to highlight some of the history of this office which, in many ways, mirrors the growth of research funding at Concordia.

In March 1971, the first University Research Grants Officer was appointed, which evolved into what is known today as the Office of Research Services. In the early days, in addition to the office managing grant applications for faculty members, we also assumed responsibility for the University's international relations activities as well as for graduate fellowships. As time went on, research grants and contracts became the prime focus of attention.

In the 1960s, research funding was readily accessible, but by the early 1970s, it was beginning to show signs of levelling off. In spite of this, Concordia researchers were becoming proficient in applying for funding and seeking out funding sources, and we believe that the presence of this office contributed to their increased activity.

In 1974, Concordia was established as a result of the union of Loyola College and Sir George Williams University. In 1972-73, just before the merger, the combined research dollars for Loyola College and Sir George Williams University were in the range of $400,000. Ten years later, we were working with $6,800,000, and today our research funding is over $15 million. This growth was due in large measure to the increasing interest of faculty members in research, and the increased number of graduate programmes. (In 1970, there were 20 graduate programmes; today there are 70.)

In the early 1970s, a number of major publications were released which addressed university research and science policy, and the role of the federal government regarding research activities: the McDonald Report (1969), the Lamontagne Report (1970), the Hurtubise-Rowat Report (1970), the Porter Report (1971) and the Bonneau-Corry Report (1972). During the past year, we have again seen a number of reports regarding university research and teaching, such as the Royal Society of Canada Report (1991), "Realizing the Potential: A Strategy of University Research in Canada" and the Smith Report (1991).

The Bonneau-Corry Report, which was commissioned by the Association of Universities and Colleges of Canada (AUCC), was concerned with the rationalization of university research. It is interesting to note that among its recommendations was the creation of research offices to assist applicants, "with the continuing responsibility of studying the conditions necessary for research work of good quality." This office had already been operating for a year when the Bonneau-Corry Report was published, so it looks as though Concordia was on the right track!

Early in the 1970s, the office of the Minister of State for Science and Technology (MOSST) was created, and it recommended that the federal granting councils be restructured to handle the growth and importance of research funding in the universities. As a result, the Natural Sciences and Engineering Research Council (NSERC) and the Social Sciences and Humanities Research Council (SSHRC) were established in 1978, and with their establishment, a number of new programmes were initiated. Research grant offices had to be well acquainted with these various funding sources as well as acquire an understanding of the programmes.

As time went on, the volume and types of grants proliferated. As an example of the growth which occurred, in the early 1970s, NSERC, then known as the National Research Council, had seven or eight programmes; by the late 1980s, there were at least 35.

As programmes increased, so did the number of applications and the availability of documentation. In 1972, the first Calendar of Granting Agencies was published by this office: 35 sources of funding were listed. The 1991 Calendar lists approximately 400.

The Councils became increasingly cost-conscious, and shifted some of their responsibilities, such as the distribution of forms and guides, to the universities' own research offices. They required increased accountability for the use of funds, so Concordia began to submit detailed reports as to how the money was spent, our success rate, which disciplines received funds, and other data. As funding opportunities became more varied, Concordia spent more and more time keeping applicants abreast of these available programmes.

Besides directing the use of these external funds, the University had a limited pool of internal funds, which this office administered through the Concordia Aid to Scholarly Activities programme (CASA). These funds were granted as seed funding, for travel to conferences, and to cover publication costs. Eventually, requests exceeded the funds available, and the University was forced to cut back. Today, Concordia has a new and much larger internal funding source available, known as the Faculty Research and Development Programme (FRDP), which provides seed funding for new researchers and support for targeted research. Thanks to the generosity of the Seagram Foundation, the Seagram Fund for Academic Innovation is now in full operation as well.

With regard to the variety of programmes that began to proliferate in the mid-1980s, not only were there research grants (operating and equipment grants), but also infrastructure, conference, collaborative research, team and strategic grants.

In addition, centre grants were initiated through the provincial granting body, Fonds pour la formation et l'aide a la recherche (FCAR). The encouragement of groups of researchers to form Consortia was beginning to take hold as well as the introduction of the National Centres of Excellence requiring cross-country participation.

As the availability of funding from both government and within the University became more difficult to obtain, emphasis and encouragement for university initiatives with industry were developing, as were programmes such as PRAI (now called CRD, or Co-operative Research and Development with Industry) grants, university-industry collaborative ventures, and government contracts. It is interesting to note that between the mid-1970s and the early 1980s, Concordia researchers were the country's major beneficiaries of NSERC-PRAI grants.

Concordia started very early to link up with industry's needs in a number of areas. This partnership has been growing, and as a result, four years ago, Concordia established the Industrial Liaison Office, initially on a part-time basis with the Université du Québec a Montréal (UQAM), and since 1990, on a full-time basis. Although this operation has been in existence only for a short time, the benefits and increased activity of our researchers in the transfer of technology have been notable. Increased activity in this area is probable as funding becomes more difficult to obtain.

In the late 1970s, the University, in an effort to stress the importance of research activities to the academic component, created the position of Associate Vice-Rector, Academic (Research). Although this was originally a part-time appointment, it has now become full-time, and the functions of this office have grown in importance, particularly in research activities. In 1990, the University adopted the policy document, "The Enhancement of Research at Concordia University" which was generated from this office.

Although research funding has grown increasingly difficult to acquire, and more applicants are forced to compete for less money, Concordia's researchers continue to increase their share of national research funding. Not only did our applications to SSHRC increase over the past two years, but our acceptance rate continued to climb relative to the national average, and is substantially higher than the national average.

Similarly, Concordia's Faculty of Engineering and Computer Science continues to outperform the national average in terms of grants from NSERC. An impressive 90 per cent of faculty members have received NSERC grants. We are proud of the fact that Concordia recently won six of NSERC's top 20 awards.

On the provincial level, Concordia's success rate with respect to Quebec's Fonds pour la formation de chercheurs et l'aide a la recherche (FCAR) grants jumped from 29 per cent in April 1990 to 41 per cent in April 1991.

Researchers have remarked that the greatest contributions of the Office has been the reliability of information and the support supplied at crucial times in their work. The Office of Research Services is dedicated to continue searching for new sources of funding and new programmes on researchers' behalf, while continuing to provide them with the services they need to further their research activities. ■

Audrey J. Williams, Director
Office of Research Services

01	Contract
02	Operating Grant
03	Equipment Grant
20	Other
(EXT)	External Award
(INT)	Internal Award
3MCAN	3M Canada Inc.
ANOCC	Anonymous Companies, Corporations, Canadian
ANOFC	Anonymous Foundations, Assoc. Societies, Canadian
ANONC	Anonymous, Non-Canadian
ANOPC	Anonymous Particular, Canadian
APPUI	Association des professeurs pour des programmes universitaires internationaux
ARNQC	Archives nationales du Quebec
BC	Bell Canada
BELLH	Bell Helicopter Textron
BENDA	Bendix Avelex Inc.
BICOM	Binary Communications Inc.
BNR	Bell Northern Research Ltd.
CAE	CAE Electronics Ltd.
CASA	Concordia University - CASA
CC	Canada Council
CCA	Conseil canadien des archives
CCIW	Canada Centre for Inland Waters
CDE	Canada Department of Environment
CDHW	Canada Department of Health & Welfare
CDINA	Canada Department of Indian & Northern Affairs
CDND	Canada Department of National Defence
CDOT	Canada Department of Transport
CEMR	Canada Department of Energy Mines & Resources
CGA	Canadian Gas Association
CIBA	CIBA-GEIGY Canada ltee.
CITC	Canada Department of Industry, Trade & Commerce
CMICC	Canadian Microelectronics Corporation
CONU	Concordia University
CORPAQ	Conseil des recherches en pêche et en agro- alimentaire du Québec
CP	Canada Post
CQRS	Conseil quebecois de la recherche sociale
DEC	Digital Equipment of Canada
ELAR	Entreposage L.A.R. inc.
ELIL	Eli Lilly Canada Inc.
FCAR	Fonds pour la formation de chercheurs et l'aide à la recherche
FITC	Fitness Canada
FRDP	Concordia University - FRDP
FRSQ	Fonds de la recherche en santé du Quebec
GAZM	Gaz métropolitain inc.
HHHM	Hannah Institute for the History of Medicine
HQ	Hydro-Quebec
HSC	Hôpital Sacré-Coeur de Montreal
IDAC	Idacom
IGRAPH	IGU Ingraph Canada

Cont'd

INVCO	Inverpower Controls Ltd.
IRSST	Institut de recherche en sante et en securite de travail du Quebec
LOTO	Loto-Quebec
MEMOT	Memotec Data Inc.
MESS	Ministere de l'enseignment superieur et de la science du Quebec
MRC	Medical Research Council
MRIAI	Ministere des relations internationales et affaires intergouvernementals du Québec
NEA	National Endowment of the Arts
NOL	Northern Oil Limited
NORTEL	Northern Telecom
NSERC	Natural Sciences & Engineering Research Council
ONTHF	Ontario Heritage Foundation
PARKE	Parke-Davis
PHHT	P. & H. Hillhouse Trust
POC	Fisheries and Oceans Canada
PRCAR	Prevost Car Inc.
PSBGM	Protestant School Board of Greater Montreal
RITE	Ritepro Inc.
SAND	Sandoz Canada
SC	Shell Canada Ltd.
SEAG	Seagram Fund for Academic Innovation
SPAR	Spar Aerospace Ltd.
SSHRC	Social Sciences & Humanities Research Council
USHEW	U.S. Department of Health & Human Services
UT	University of Toronto
VMTL	Ville de Montreal
WTGF	William T. Grant Foundation

TABLE I

DEPARTMENTAL RESEARCH FUNDING 1990-91

Library	20	$ 99,447
Adult Education	1	1,200
Archives	1	24,600
Research Administration		305,000
TOTAL FOR ADMINISTRATION	32	$ 430,247

* Research Administration includes contributions from the Centre de recherche informatique de Montreal (CRIM)

Dean of Arts and Science		$ 16,000
Applied Social Science	9	7,000
Biology	27	1,022,436
Centre de recherche en histoire	1	76,113
Chemistry	23	1,093,860
Classics	3	3,000
Communication Studies	18.5	20,712
Economics	25	66,267
Education	26	163,412
English	33	42,000
Études françaises	22	73,092
Exercise Science	8	93,604
Geography	11	173,400
Geology	6	19,400
History	23	182,383
Institute for Cooperative Education	1	10,631
Institut Simone de Beauvoir	1	38,899
Journalism	2.5	2,800
Library Studies	2	3,222
Mathematics	37.5	618,872
Philosophy	9	51,097
Physics	13	120,865
Political Science	18	102,367
Psychology	41	2,656,774
Religion	11	73,473
School of Community and Public Affairs (SCPA)	1	9,939
Sociology & Anthropology	27	284,569
TESL	11	70,371
Theological Studies	7	2,857
TOTAL FOR ARTS & SCIENCE	428.5	$ 6,943,311

[redacted]

CONT'T

[redacted]

Accountancy		33,317
Decision Sciences & Management Information Systems (DSMIS)	23	188,846
Finance	19	129,568
Management	27	109,745
Marketing	17	155,741
TOTAL FOR COMMERCE & ADMINISTRATION	111	$ 619,217

[redacted]

Dean of Engineering		$ 2,000
Centre for Building Studies (C.B.S.)	14	1,033,117
Civil Engineering	14	381,640
Computer Science	27.5	1,854,803
Electrical and Computer Engineering	23	2,046,609
Mechanical Engineering	26	2,223,829
TOTAL FOR ENGINEERING & COMPUTER SCIENCE	106.5	$ 7,362,006

[redacted]

Dean of Fine Arts		$ 490
Art Education & Art Therapy	11	1,490
Art Gallery	1	16,600
Art History	11	26,238
Cinema	12	33,600
Design Art	7	3,050
Music	13	8,590
Painting and Drawing	15	1,800
Printmaking & Photography	9	58,245
Sculpture, Ceramics and Fibres	8	8,023
Theatre	11	36,668
TOTAL FOR FINE ARTS	98	$ 194,044

TABLE 2

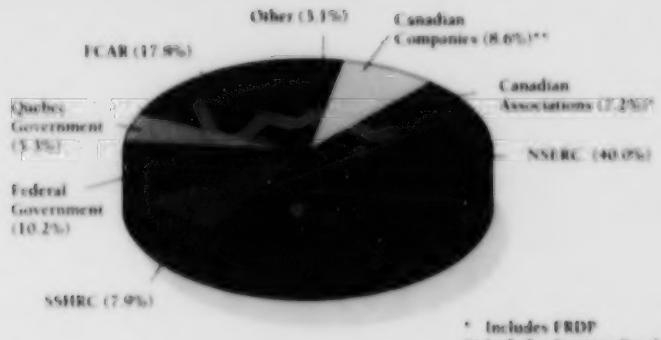
FUNDING OF RESEARCH GRANTS & CONTRACTS

FIVE YEAR COMPARISON 1986-1991

Canadian Companies and Corporations	978,853	1,156,509	808,185	1,126,957	1,507,870
Canadian Associations, Foundations and Societies	253,391	490,086	583,189	601,901	1,131,185
NSERC	4,278,813	4,698,637	5,672,397	5,955,290	6,293,631
SSHRC	495,716	814,494	942,201	1,203,847	1,240,677
Other Federal Government Departments	1,069,724	783,351	918,972	1,988,142	1,693,633
FCAR	1,553,487	1,535,773	1,513,620	2,586,289	2,796,437
Quebec Government	878,194	1,360,989	1,419,015	1,313,886	829,141
Non-Canadian Organizations	37,854	39,095	63,042	93,536	98,240
United States Government	[illegible]	197,487	974,157	582,727	387,082
Other Sources	84,242	128,044	136,966	233,052	17,134
Total Grants & Contracts	$ 9,845,694	$ 11,144,413	$ 12,455,744	$ 15,409,607	$ 15,748,825

Annual % Increase	11.5%	13.2%	11.8%	23.7%	2.2%
Grants	$ 8,539,816	$ 9,499,950	$11,346,431	$13,483,646	$14,101,478
Contracts	$ 1,280,878	$ 1,644,463	$ 1,109,333	$ 1,926,161	$ 1,557,348

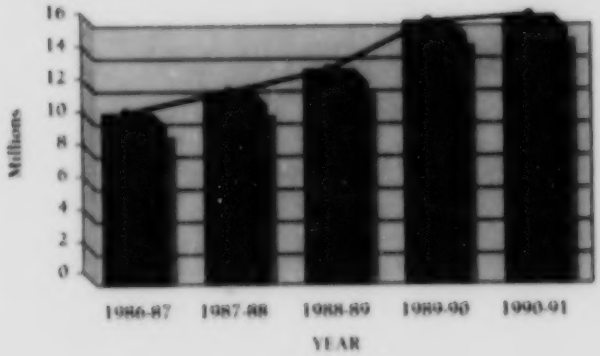
1990-91



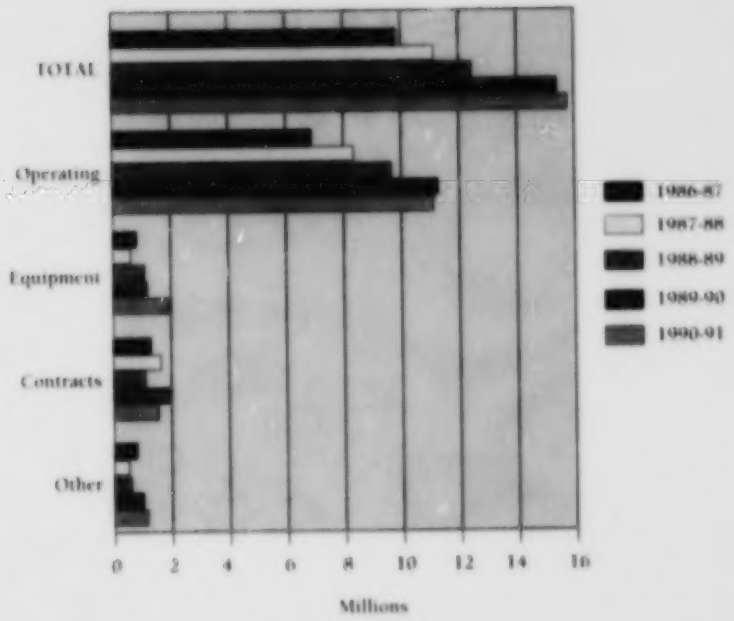
* Includes FRDP

** Includes Seagram Fund for Academic Innovation

[redacted] 1986-91



[redacted] 1986-91



This centre, the first of its kind in Canada, started operating in May 1983 with a $500,000 grant from the Natural Sciences and Engineering Research Council of Canada (NSERC). It enables chemists and physicists to do research requiring a very short-lived optical pulse. Using an amplified laser, a low-level light detector, and a "streak" camera, researchers can detect and record extremely fast chemical processes which would be impossible to track in a conventional laboratory.

The work has dramatic implications. Concordia Chemistry Professors Nick Serpone and Cooper H. Langford, for example, are working on the use of semi-conductors to eliminate a variety of toxins from water. Other researchers use the Centre's kinetic spectrophotometric equipment to study very rapid chemical processes in nature, such as photosynthesis.

The mode-locked laser currently used by the Centre emits a pulse of 30 picoseconds (30 x 10-12 s, or one million-millionths of a second). A choice of wavelengths may be used to excite the sample under investigation, and a portion of the pulse is used as a monitoring light source for the excited sample. The emission and absorption of ultra-violet or visible light is calculated on a computer and a thermal printer.

The current Director of the Centre, Dr. Devendra K. Sharma, as part of a project funded by NSERC, is finalizing a new laser apparatus which will enable the Centre to offer transient spectroscopy in the even faster domain of the femtosecond (10-15 s).

In addition to numerous projects by Concordia's own staff and graduate students, the Centre's facilities have been used by 3M of St. Paul, and by researchers from universities across North America, and in France, Switzerland and Yugoslavia. ■

■ *Colliding Pulse Mode-Locked Femtosecond Dye Laser*

The Centre de recherche en histoire is based upon one mammoth project: the reconstruction and compilation of the Debates of the Legislative Assembly of United Canada from 1841 to 1867, the year of the Canadian Confederation.

The project was begun, fittingly enough, in 1967, Canada's centenary year. When it is finished, its 80-odd volumes will be a precious resource for historians. Many of our current concerns such as free trade, policy concerning aboriginal peoples and the shape of the constitution were already being vigorously discussed during this period.

The task of reconstructing the debates is difficult, as verbatim accounts of parliamentary proceedings are not available. By cross-checking contemporary newspaper reports with the official journal of votes and motions, Dr. Cameron Nish and his staff have built up a record of our struggle toward nationhood.

The debates of 1849, for example, were particularly lively. That was the year the Montreal-based forerunner of our present-day House of Commons passed the Rebellion Losses Bill to compensate for property lost in the struggles of 1837-38. The debates were furious, and overflowed into the streets of Montreal, where an angry mob burned the legislative building to the ground.

Dr. Cameron Nish has given 25 years of his career to this project, and to the Centre which houses it. Notwithstanding the acquisition of computer database and desktop publishing technology, work on the project remains labour-intensive. Staff is recruited from all four Montreal universities to give as many young historians as possible the chance to learn research methodology.

Funding has come from the Social Sciences and Humanities Research Council of Canada (SSHRC) and two of its adjuncts, the Social Science Federation of Canada (SSFC), the Canadian Federation for the Humanities (CFH), and the Ontario Heritage Foundation, as well as from the University itself. The latest grant from the SSHRC is contingent on completing the project by 1996, a goal for which $800,000 in additional funding remains to be found. ■

■ *Professor Cameron Nish and copies of the Debates of the Legislative Assembly of United Canada*

The basis for the Centre is a large collection of scripts, amassed from across Canada by English Professor Howard Fink. These treasures from the golden years of CBC radio drama have more than nostalgic value. They represent the beginnings of an English-Canadian national theatre, and a window on the way we were.

The Radio Drama Research Project was established in 1973 to preserve and study the scripts, and the archives became the official repository of all CBC radio-drama paper materials. The Centre was created in 1981 as an interdisciplinary research centre for the growing number of interested scholars.

The Centre encourages the collection and indexing of script, sound and related printed materials; provides information about broadcasting, especially CBC radio drama; conducts historical, socio/cultural and literary analyses of Canadian cultural development with an emphasis on broadcasting; and supervises the work of graduate students in this field. Students have used the scripts of Andrew Allan, Lister Sinclair, Patricia Joudry, Len Peterson and W. O. Mitchell, among others, to write Master's and Doctoral theses.

In addition to the script collection, the Centre has 14 private collections of personal papers and internal memoranda donated by CBC performers, writers and producers, a collection of audio tapes of drama productions, a library of specialized books on broadcasting and related fields, and the most complete collection of Canadian broadcast listings in existence.

Eight books and more than a dozen articles have been published by research fellows and associates of the Centre, and others are in progress. Their disciplinary affiliations include literature, history, sociology, anthropology, political science, education, communications and drama. They are full-time faculty members of Concordia and other universities, including York University, Brock University, the Université du Québec à Montréal, and the Université de Bordeaux, France. The connection with the French university has led to visiting exchanges, and a project to compile a general history and lexicon of radio drama in French- and English-speaking countries.

The directorship of the Centre has alternated every three years between Sociology Professor John Jackson, the present director, and Professor Fink. Pierre Juneau, former President of the CBC and Visiting Professor of Communications at the Université de Montréal, is Chair of the Centre's Advisory Board. The Centre would like to extend its collection beyond drama production to radio features, music, news and current affairs and sports, and beyond CBC materials to those of provincial, community and private radio stations. This would enable researchers using the Centre to study radio as a cultural institution, and to examine provincial and federal cultural policies. There are also plans to move into policy analysis and consultation.

While the archives are computer-accessible, the collection itself continues to grow and demand more space. Research continues on the historical, literary and sociological aspects of radio theatre, as does the indexing of the collections. The Centre has received over $550,000 in funding from the Canada Council, the Social Sciences and Humanities Research Council of Canada (SSHRC), les Fonds pour la formation des chercheurs et l'aide à la recherche (FCAR), as well as from private sources. ■

■ *Professor Jackson and Professor Fink examine a new addition to the Collection.*

The Centre for the Study of Classroom Processes' primary function is to conduct educational research. In support of research activities, it serves as a resource centre for educators, actively trains teachers in classroom techniques, and provides research experience and training for graduate students.

The Centre is affiliated with the University's Department of Education which offers graduate degrees in Child Study (MA), Educational Studies (MA), and Educational Technology (MA, PhD).

The Centre is particularly interested in co-operative learning, a technique which emphasizes group work, positive interdependence, and individual accountability. When properly applied, co-operative learning is an effective way to teach both facts and concepts, and enables students to analyze, synthesize and evaluate what they have learned. It also pays valuable dividends in self-concept, academic motivation, inter-personal skills, perspective-taking and other affective qualities.

The Centre gives workshops and seminars to sharpen the ability of classroom teachers. Centre members have done considerable in-service training in Montreal, and have gone as far afield as the Nova Scotia College of Agriculture and the inner-city schools of Winnipeg.

The Centre maintains an electronic catalogue of resources on classroom processes for the use of professionals and student teachers which is the only one of its kind in Quebec. The Centre also has a growing collection of research literature, books, videotapes and curricular materials on classroom processes.

Currently, the Centre's research interests include cooperative learning, dramatic play, and concept mapping which incorporate theory and prior research from educational, social, and cognitive psychology. The Centre does experiments in field settings as well as systematic reviews of the literature.

Centre members include: Philip C. Abrami (Director); Bette Chambers (Associate Director); Sylvia d'Apollonia, Christina De Simone, Mona Farrell, Alexandra Glashan, Nina Howe, Steven Rosenfield, and Richard Schmid (academic staff); Catherine Poulsen (Professional Research Associate); Anne Wade (Information Specialist) and James Howden (Staff Development Associate). ■

■ *Researchers and students engaged in group discussion at the Centre for the Study of Classroom Processes*

Microelectronics technology and computer systems design are essential to our modern economy. Ever-increasing dependence on the computer by industries and the services sector means steady pressure on our scientists to design, combine and apply computer systems in new and ingenious ways.

The VLSI and computer systems group at Concordia is part of a highly successful joint venture in high-performance computer architecture and very-large-scale integration (VLSI) with three other Montreal-area universities.

In 1985, researchers from Concordia, the Ecole Polytechnique, McGill University and the Universite de Montreal received a five-year grant from the Québec government which enabled them to pool their resources in VLSI and computer systems design. The project outlived its grant and was given a new name: GRIAO-Groupe de recherche interuniversitaire en architecture des ordinateurs de haute performance et VLSI, or, the Inter-University Research Centre in High-Performance Computer Architecture and VLSI.

The research at this centre spans a wide range of topics: parallel and distributed computing, design and validation of delay-insensitive VLSI systems, multi-threaded architecture, VLSI design automation, high-level VLSI synthesis, fault-tolerant and reconfigurable architectures, signal-processing architectures, and analog VLSI, among others. This work will have a major impact on computer architecture, communications, and VLSI CAD systems.

Concordia's team includes eight professors, six post-doctoral fellows, and over 30 Doctoral and Master's students. The group, co-ordinated by Dr. K. Thulasiraman, a founding member of the research centre, also includes Dr. B. Haroun, Dr. A. J. Al-Khalili, Dr. M. O. Ahmad, Dr. B. B. Bhattacharyya, Dr. R. Jayakumar, Dr. H. F. Li, and Dr. D. K. Probst.

The Concordia group is directly funded by Concordia University, and has attracted considerable federal, provincial and industrial funding, to an annual total of more than $400,000.

In addition to its fruitful relationship with other members of GRIAO, the group at Concordia benefits from close research links with national and international research groups, such as MICRONET, a federal Network of Centres of Excellence on microelectronic circuits, systems and devices; the Centre de recherche informatique de Montreal (CRIM); Bell Northern Research; the University of Karlsruhe, Germany; AT & T Bell Labs, New Jersey; and CADENCE, Santa Clara, California. ■

■ *Professor Haroun in the VLSI CAD Laboratory*

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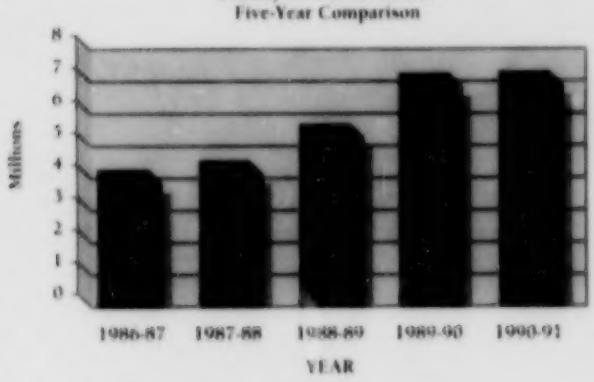
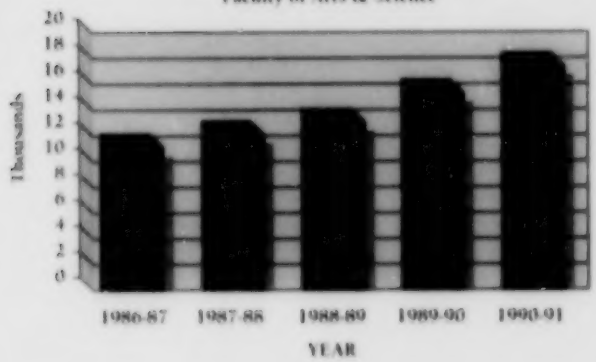
MARRELLI, N.	[redacted]		
	Jazz a Montreal : La Collection Alex Robertson	ARNQC	(EXT) 02
	Backlog : les archives audiovisuelles	CCA	(EXT) 02
	Conservation et restauration des documents d'archives	CCA	(EXT) 02
[redacted]			
HEFT, R.	Identification of Learning Needs of Adult Educators in the English Speaking Sector of Quebec	ANOFC	(EXT) 02
[redacted]			
BENNETT, J.	The Irving Layton Project	SSHRC	(INT) 02
	Mary McCarthy: An Annotated Bibliography	SSHRC	(EXT) 02
LERNER, L.	Canadian Film: A Bibliography and Guide to the Literature (CANADIAN STUDIES RESEARCH TOOLS)	SSHRC	(EXT) 02
	Art and Architecture in Canada	SSHRC	(INT) 02

The Faculty of Arts and Science is the largest of Concordia University's four Faculties, housing departments from the Natural Sciences, the Humanities, and the Social Sciences. The diversity of funded research is evident from the list of research grants and contracts which follows. Total research funding has increased by 73% over the level five years ago, and the average grant size has increased by 60% during the same period, while the number of external grants increased from 193 in 1986-87 to 235 in 1990-91. Grants awarded from NSERC account for 34.2% of the Arts & Science total for 1990-91, while 12.1% come from SSHRC and 33.6% from FCAR.

Faculty of Arts & Science
Five-Year Comparison



Average Grant Based on Number of Awards
Faculty of Arts & Science



Among the significant research groups and facilities housed by the Faculty are: Centre Interuniversitaire en Calcul Mathématique Algébraique (CICMA) located in the Mathematics Department, the Centre for the Study of Classroom Processes (CSPC) affiliated with the Department of Education, the Canadian Centre for Laser Flash Photolysis in the Department of Chemistry and Biochemistry which assisted by NSERC funding is currently being upgraded to add femptosecond capability to the existing picosecond equipment. Two important centres affiliated with the Department of Psychology are: the Centre for Research in Human Development (CRDH), and the Centre for Studies in Behavioural Neurobiology (CSBN). Several members of the Psychology Department participate in two National Centres of Excellence: Neural Regeneration and Functional Recovery, and the National Network for Independence and Productivity.

Another important research activity being pursued in the Faculty is The Leonardo Project, an interdisciplinary project which seeks an understanding of the interaction of the performer and the piano. This project is funded by the Seagram Fund for Academic Innovation, and involves members of the Departments of Psychology and Music. ■

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FACULTY OF ARTS & SCIENCE

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VALASKAKIS, G.	Support of Northern Training to Students Organized Through the Northern Studies Committee	CDINA	(EXT) 02

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GAVIN, J.	Sports Injuries: A Model for Promoting Psychological Recovery (Taylor, M.)	FRDI	(INT) 02
	Adding Psychological Assessment to the Exercise Advisement Process	SSHRC	(INT) 02
TAYLOR, M.	SEE GAVIN, J.		

[redacted]

ALBERT, P.	Insect Chemosensory Mechanisms and Host/Food Selection	NSERC	(EXT) 02
	Le succes reproducteur chez les insectes: une approche multidisciplinaire (McNeil, J.; Laval, Delisle, J.; Laval)	FCAR	(EXT) 02
ANDERSON, P.	Behavioural Thermoregulation, Bioenergetics and Developmental Fitness in Juvenile Salmonidae Fishes (COOPERATIVE GRANT WITH NSERC)	POC	(EXT) 02
	Evaluer l'adaptabilité des OSAR, MTI et IEM aux besoins de caracterisation et de contrôle des effluents industriels du PASL	CDE	(EXT) 01
CHOI, A.	Viral Receptors for Reovirus	NSERC	(EXT) 02
CUPPLES, C.	Evolution of the Genetic Code	FCAR	(EXT) 02
	Cellular Responses to Mutagenic Events	NSERC	(EXT) 02
	SEE GULICK, P.		
ENESCO, H.	Lifespan: Influence of Physiological and Cellular Factors	NSERC	(EXT) 02
ESPIE, G.	Motor-Driven Laboratory Press and French Pressure Cells	NSERC	(EXT) 03
	Inorganic Carbon Treatment of Cyanobacteria	NSERC	(EXT) 02
	Control of Photosynthesis in Aquatic Micro-Organisms	FCAR	(EXT) 02
FAIRBAIRN, D.	The Evolution and Adaptive Significance of Migratory Polymorphism and Sexual Size Dimorphism in Temperate Waterstriders	NSERC	(EXT) 02
	Patterns of Variation in Complex Traits along a North-South Cline: Selection or Drift?	NSERC	(INT) 20

GIRALDEAU, L.-A.	Experimental Studies of Group Foraging Behaviour	NSERC	(EXT) 02
	L'usage d'informations au sein de groupes alimentaires: une approche eco-ethologique a l'apprentissage	FCAR	(EXT) 02
	La theorie de l'exploitation economique des ressources et ses conséquences pour le système sociale des Tamias (Kramer, D. - McGill)	FCAR	(EXT) 02
GRANT, J.	Resource Defense in Fishes	NSERC	(EXT) 02
	Territorial Behaviour and Habitat Selection in Stream-Dwelling Salmonids	FCAR	(EXT) 02
	Effet des contraintes alimentaires sur la selection de l'habitat (Magnan, P. - UQTR)	FCAR	(EXT) 02
GULICK, P.	The Molecular Genetic Analysis of Salt-Stress Tolerance in Lophopyrum Elongatum (Cupples, C., Herrington, M., Storms, R.)	NSERC	(INT) 02
	Gene Regulation and Salt-Stress-Tolerance in Lophopyrum Elongatum and Wheat	FRDP	(INT) 02
	Rotor for Ultracentrifuge plus accessories	NSERC	(EXT) 03
	SEE IBRAHIM, R.		
HERRINGTON, M.	Regulation of the folA Gene of Escherichia Coli	FRDP	(INT) 02
	Suppression by ThyA Mutants of Escherichia Coli	NSERC	(EXT) 02
	SEE GULICK, P.		
HILL, C.	Role of Potassium and Chloride Channels in Hepatic Signal Transduction	FCAR	(EXT) 02
	Patch-clamp Studies of Membrane Currents and their Role in Signal Transduction in Single Liver Cells	NSERC	(EXT) 02
IBRAHIM, R.	Engineering-Altered Secondary Metabolism in Brassica (STRATEGIC GROUP) (Brisson, N. - Univ de Mtl, De Luca, V. - Univ de Mtl)	NSERC	(EXT) 02
	Biochemistry and Biotechnology of Secondary Plant Metabolites (Colebrook, L., Gulick, P., Khouri, H.)	FCAR	(EXT) 02
	Enzymology and Compartmentation of Plant Secondary Metabolites	NSERC	(EXT) 02
	UV-Visible Scanning Spectrophotometer	NSERC	(EXT) 03
KORNBLATT, J.	Cytochrome c Oxidase: Structure and Structural Change During Catalysis	NSERC	(EXT) 02
KHOURI, H.	SEE IBRAHIM, R.		
MALY, E.	Factors Affecting Incidence of Calanoid Copepod Populations	NSERC	(EXT) 02
MANGAT, R.	Protoplast Isolation and Cell Regeneration of Lentil (Lens culinaris)	NSERC	(INT) 02
McLAUGHLIN, D.	Ecology of Cyclocorlum mutabile: Biotic and Abiotic Factors Influencing Infections in Snail Communities	NSERC	(INT) 02

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McLAUGHLIN, D.	Host-Parasite Relationships of Sphaeridiotrema globulus	FRDP	(INT) 02
	Waterfowl Parasites	NSERC	(INT) 02
NEWMAN, E.	Construction of a Genetically Engineered Bacterial Strain for the Commercial Production of L-Serine from Glycine (STRATEGIC)	NSERC	(EXT) 02
	L-Serine Deaminase: Molecular, Physiological and Enzymological Aspects	NSERC	(EXT) 02
	Characterization of Monster Cells of E. Coli	NSERC	(INT) 02
ROY, R.	Diminishing Radiation Damage and Enhancing Immune System	CDND	(EXT) 01
RUBY, S.	Mechanism of Action of Subiethal Cyanide in Rainbow Trout Vitellogenesis	NSERC	(EXT) 02
STORMS, R.	Regulation of the Periodically Expressed TMP1 Gene	NSERC	(EXT) 02
	SEE GULICK, P.		
WIDDEN, P.	Ecology of Fungi Involved in Litter Decomposition	NSERC	(EXT) 02
	Mycorrhizal Infection and Tree Nutrition in Relation to Sugar Maple Decline (O'Halloran, J. - McGill)	CORPAQ	(EXT) 02
	The Effect of Base Cations on Nutrients Cycling in an Acidified Forest Ecosystem (Camire, C. - Laval, Cote, B. - McGill, Courchesne, J. - Univ. de Mtl, Fyles, J. - McGill, Hendershot, W. - McGill, O'Halloran, I. - McGill)	FCAR	(EXT) 02

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NISH, C.	Debates of the Legislative Assembly of United Canada, 1841-1867	ONTHF SSHRC	(EXT) 02 (EXT) 02

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ABLENAS, F.	Polystyrene- and Polyvinylpyridine - Bound Tridentate Sulfide Derivatives: Synthesis and Development of Sensor Devices (Lawrence, M.)	NSERC	(INT) 02
	The Synthesis of Sulfonium and Sulfinyl Analogues of Prophylactic and Therapeutic Agents for Fluorophosphate Antiacetycholinesterases	CDND	(EXT) 01
ADLEY, T.	An Investigation of the Corrosivity and Toxicity of Combustion Products of Telephone Cable Insulation	BC	(EXT) 01
BIRD, P.	Synthetic, Crystallographic and Catalysis Studies in Organometallic Chemistry	CASA	(INT) 02
CAPOBIANCO, J.	Structural Investigation of Rare Earth Doped SiO2 Glass using Dilution narrowed Spectroscopy, Optical Spectroscopy Molecular Dynamic Simulations	NSERC	(EXT) 02
	Liquid Helium Cryostat	NSERC	(EXT) 03
COLEBROOK, L.	Studies In Organic Structure and Stereochemistry	NSERC	(EXT) 02
	SEE IBRAHIM, R. (Biology)		

DAUNT, S.	Laser, FT-IR and Jet Spectroscopy of Astrophysical Molecules	NSERC	(EXT) 02
DENES, G.	Mossbauer Spectroscopy	NSERC	(INT) 03
	Fluoride Ion Conductors and Oxide Superconductors	NSERC	(EXT) 02
ENGLISH, A.-M.	Ligand Binding and Redox Properties of Heme Proteins	NSERC	(EXT) 02
	Glove Box for Anaerobic Manipulation of Proteins	NSERC	(EXT) 03
	The Physiological Role of Nitric Oxide (NO) (Amir, S.)	NSERC	(INT) 02
HILL, B.	Structure and Function Studies of the Reactions Catalysed by Cytochrome Oxidase	NSERC	(EXT) 02
	Digital Oscilloscope for Transient Absorbance Spectroscopy	NSERC	(EXT) 03
	SEE LANGFORD, C.		
KHAN, R.	Use of Yeast Mutants in the Study of Mammalian Preprosomatostatin Processing	NSERC	(EXT) 02
KORNBLATT, M.J.	Enolases: Subunit Interactions and Mechanisms	NSERC	(EXT) 02
	EPR and Proton-Relaxation Rate NMR Studies of the Binding of Mn(II) to Enolase	NSERC	(INT) 20
	UV-Visible Recording Spectrophotometer	NSERC	(INT) 03
LANGFORD, C.	Inorganic Photochemistry and Environmental Speciation (Zienius, R.)	NSERC	(EXT) 02
	Modernization of the Canadian Centre for Pico-second Spectroscopy to a Comprehensive Fast Spectroscopy Centre (Hill, B., Saber, J., Serpone, N.)	NSERC	(EXT) 03
	Hygrophobic Ceramics for Waste Disposal (STRATEGIC GROUP) (Le Van Mao, R.)	NSERC	(EXT) 02
	Development of F-N Heterojunction Cells on Organic Semiconductors (Dodelet, J.-P., INRS, Gravel, D., Univ de Mtl, Lawrence, M.)	NSERC	(EXT) 02
LAWRENCE, M.	Development of Photovoltaic Cells using Polycrystalline CdTe Grown by the Liquid Metal-Vapor Reaction	NSERC	(EXT) 02
	See ABLENAS, F.		
LE VAN MAO, R.	Zeolite Catalysts	NSERC	(EXT) 02
	High Performance Catalysts for the Aromatization of Light Alkanes (STRATEGIC)	NSERC	(EXT) 02
	Mini-Compressor for Feeding Isobutene	NSERC	(EXT) 03
	SEE LANGFORD, C.		
MIKKELSEN, S.	UV-Visible Spectrophotometer	NSERC	(EXT) 03
	Electrochemical Biosensors	NSERC	(EXT) 02

POWLOWSKI, J.	Characterization of a Novel Multicomponent Phenol Hydroxylase from Pseudomonas Strain CF600	NSERC	(INT) 02
	Enzymology of the Phenol Degradation Pathway Encoded by the dmp Operon of Pseudomonas CF600	FRDP	(INT) 02
	Incubator-shaker	NSERC	(EXT) 03
SERPONE, N.	Fundamental Studies in Heterogeneous Photocatalysis/Inorganic Photochemistry	NSERC	(EXT) 02
	SEE LANGFORD, C.		
SHARMA, D.	Support of Research in the Canadian Centre for Picosecond Laser Flash Spectroscopy	IMCAN	(EXT) 02
TEE, O.	Studies in Physical Organic Chemistry	NSERC	(EXT) 02
ZIENIUS, S.	SEE LANGFORD, C.		

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BOLTON, M.	SEE PRESTON, E.		
PRESTON, E.	Myth and Metamorphosis: An Examination of the Latin Poet Ovid's Treatment of the Theme of Metamorphosis in his Depiction of Greek Mythical Figures (Bolton, M.)	FRDP	(INT) 02

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BUXTON, W.	The Rockefeller Foundation and the Origins of Communications Research	SSHRC	(INT) 20
	Pareto and the American Mind	SSHRC	(EXT) 02
CHARLAND, M.	The Rhetoric of Technology	SSHRC	(EXT) 02
KOVATS, T.	Economics and Information	FRDP	(INT) 02
SHINAR, D.	The "Virtual Classroom": Media Literacy in the Service of Multi-Cultural & Cross-Cultural Education	SSHRC	(INT) 02

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AHSAN, S.	The Design and Reform of Direct and Indirect Taxation in a Developing Economy	FRDP	(INT) 02
	Taxation and Development: Design of Direct and Indirect Taxation	SSHRC	(INT) 02
BELZIL, C.	Testing Models of Unemployment Hysteresis Based on the "insiders" Distinction	SSHRC	(INT) 02
CAMPBELL, B.	Nonparametric Statistical Method in Empirical Economics	FRDP	(INT) 02
FISHER, G.	The Impact of Taxation on Business Finance	SSHRC	(EXT) 02

LEBLANC, G.	Competing for Agents: An Industrial Structure Model of Efficiency Wages	FRDP	(INT) 02
	Competition and the Principal-Agent Problem	SSHRC	(INT) 02
McINTOSH, J.	A Qualitative Analysis of Canadian Investment Intentions	SSHRC	(EXT) 02
SAMPSON, M.	The Construction of a Macroeconomic Forecasting Model for Canada and the United States	SSHRC	(INT) 02
SHAPIRO, D.	Les implications pour le Canada de l'integration du marche militaire nord-americain (Fournier, P., UQAM)	SSHRC	(EXT) 02
	A Reassessment of Sex Discrimination in Canadian Labour Markets (Smith, B., York Univ, Stelcner, M.)	SSHRC	(EXT) 02
STELCNER, M.	A Reassessment of Sex Discrimination in Canadian Labour Markets (Shapiro, D., Smith, B., York Univ)	SSHRC	(EXT) 02
WILLSON, D.	Simulation Methods for Estimating Linear Latent Variable Models with Categorical Indicators	SSHRC	(INT) 02
	Theory and Applications of Spectral Shape Tests in Macroeconomics and Finance	FRDP	(INT) 02

ABRAMI, P.	Effective Learning by Students in Teams (Deßellefeuille, B., Farrell, M.)	FCAR	(EXT) 02
	Cooperative Learning in Classrooms	SSHRC	(EXT) 02
BAGGALEY, J.	SEE GOLDEVIN, G.		
BARAKETT, J.	Women and Education: Sociological Perspectives	SSHRC	(INT) 02
BARON, L.	The Benefits of Tai Chi as a form of Movement Education in the Elementary Classroom	FRDP	(INT) 02
BERNARD, R.	The Development and Validation of a Model of Learning Success in Distance Education	SSHRC	(INT) 02
BOYD, G.	Computer Supported Cooperative Professional Knowledge Development through Cybernetic Modeling and Experiential Learning	SSHRC	(INT) 02
CHAMBERS, B.	Enhancing Prosocial Behaviour in Young Children	FRDP	(INT) 02
CLEGHORN, A.	First Language Development in Second Language Classrooms: The Case of Kenya	SSHRC	(INT) 02
GOLDEVIN, G.	Matching Learner Characteristics with Levels of External Control in Designing Interactive Video: Maximum User Control Options Compared (Baggaley, J., Tovar, M.)	FCAR	(EXT) 02
d'APPOLLONIA, S.	Cooperative Networking: Ways of Facilitating Understanding in the Sciences	SEAG	(INT) 02
DEBELLEFEUILLE, B.	SEE ABRAMI, P.		

FARRELL, M.	Students Perceptions and Attitudes Towards the Instructional Structure Whole Class/Question Answer (Lecture Method)	SSHRC	(INT) 02
	SEE ABRAMI, P.		
JACOBS, F.	Maternelle et garde scolaire: qualite des environnements, communication entre les personnels et competences de l'enfant (Baillargeon, M. - Laval; Betsalel, R. - Univ de Mtl)	FCAR	(EXT) 02
	Evaluation des enfants dans deux milieux: maternelle et service de garde en milieu scolaire (Baillargeon, M. - Laval; Betsalel, R. - Univ. de Mtl; White, D.)	CDHW	(EXT) 02
HOWE, N.	Children's Social Knowledge and Understanding of the Sibling Relationship	SSHRC	(INT) 02
FOVAR, M.	SEE COLDEVIN, G.		
[redacted]			
FREIWALD, R.	Gender, Creativity and Literary Production	SSHRC	(EXT) 02
NEWELL, A.	Hamlet and Hamletism	SSHRC	(INT) 02
[redacted]			
L'HERAULT, P.	SEE SIMON, S.		
LEBRUN, C.	Discours sociaux et litterature quebecoise pour la jeunesse (1970-1990)	FRDP	(INT) 02
LEQUIN, L.	L'ecriture migrants des femmes au Quebec	SSHRC	(INT) 02
SIMON, S.	L'identite et l'heterogene dans la prose romanesque quebecoise (L'Herault, P.)	SSHRC	(EXT) 02
VERTHUY, M.	L'ecriture migrante au Quebec, 1960-1979: vers une comprehension mutuelle	SEAG	(INT) 02
	Helene Parmelin face à la presse de droite	SSHRC	(INT) 02
WAGNER, M.-F.	La figure d'andromede du maniernisme en baroque (Laframbroise, A. - Univ de Mtl; Sigurel, F. - Univ de Mtl)	FCAR	(EXT) 02
WOODSWORTH, J.	A Thematic History of Translation	SSHRC	(INT) 02
[redacted]			
GAUVIN, L.	A Prospective Study of the Relationship Between Chronic Exercise and Physical and Psychological Well-Being	FITC	(EXT) 02
JANKOWSKI, J.	Doppler Ultrasonic Bubble Monitor Instrument	NSERC	(INT) 03
KILGOUR, R.	Regeneration and Reinnervation of the M.-tonicum in Experimental Diabetes	NSERC	(INT) 02
MA, S.	Modeling and Mathematical Simulations of Muscle Energetics and Fatigue	NSERC	(INT) 02
	Quantitative Characterization of Human Neuromuscular Dynamics	FRDP	(INT) 02
PARIS, D.	The Effects of Ankle Taping and Bracing on Ankle Ranges of Motion and Power Performance Tests over Extended Activity Periods	NSERC	(INT) 02

SULLIVAN, S.	Recovery of Motor Function Following Traumatic Brain Injury	NSERC	(INT) 03
	Vers la reintegration des victimes de traumatisme cranio-cerebrale (Drouin, G., Institut de readaptation de Montreal)	SAAQ/FRSQ	(EXT) 02
[redacted]			
AIKEN, R.	Colonialism and Exploitation of Natural Resources: the Sarawak Trade in Non-Timber Forest Products, 1841-1941	SSHRC	(INT) 02
ANDERSON, J.	The Design of Symbols for a Young Child's Map of a Familiar Place — Their School	SSHRC	(EXT) 02
FROST, D.	Acquisition, Modification and Installation of an Urban Geographic Information System	IGRAPH	(EXT) 02
GREENE, D.	Micrometeorological Models of Wind Dispersal of Seeds	NSERC	(EXT) 02
SLACK, B.	Ports Economic Impact Study	CDOT	(EXT) 01
	Etude historique sur le patrimoine industriel Montrealais	VMTL	(EXT) 01
	La contribution des ports de petite et moyenne taille du developpement economique regional (Comtois, C., Univ de Mtl)	FCAR	(EXT) 02
THORNTON, P.	Infant Survival in Nineteenth-Century Montreal (Olson, S., McGill)	SSHRC	(EXT) 02
ZACHARIAS, J.	Locational and Environmental Factors in Pedestrian Circulation Patterns Generated by Office Development Projects in the Downtown	FRDP	(INT) 02
[redacted]			
KUMARAPELI, S.	Extensional Tectonics of East China	NSERC	(INT) 02
	Mechanics of Dyke Propagation and Mode Emplacement of Dyke Magma in a Giant Radiating Mafic Dyke Swarm	NSERC	(EXT) 02
ST. SEYMOUR, K.	Record of Magmatic Processes from Plagioclase Zonation Patterns in the Lesbos Volcano, Back-Arc Basin, Central-Eastern Aegean Sea, Greece	NSERC	(INT) 02
	Volcanic Petrogenesis of Nisyros Volcano, Aegean Island Arc	NSERC	(EXT) 02
[redacted]			
CHALK, F.	The Collection of Oral History Evidence on the Experiences of Gypsy Survivors of the Holocaust (Tyrnauer, G.)	SSHRC	(INT) 02
	Further Explorations of the History and Sociology of Genocide: Comparative Analyses	SSHRC	(INT) 02
FICK, C.	A Social History of Slavery on a Caribbean Isolate: St. Barthelemy, 1648-1878	SSHRC	(EXT) 02
GINTER, D.	The Wyvill Papers, 1779-1783	SSHRC	(EXT) 02

HUSTON, L.	Histoire sociale de l'academie des beaux-arts en France 1795-1895	SSHRC	(EXT) 02
KEATING, P.	The Control and Elimination of Diphtheria in Canada: 1890-1940	HHMI	(EXT) 02
	Le role des instruments dans la recherche scientifique: les trieuses des cellules (1900-1985)	FCAR	(EXT) 02
	Natural Antibodies and the Development of Immunology 1890-1979	SSHRC	(EXT) 02
RUDIN, R.	Quebec, Ireland and the British Empire, 1759-1867	SSHRC	(INT) 02
SCHADE, R.	The Development of Materials Towards the Creation of an Inclusive Curriculum	SEAG	(INT) 02
SHLOSSER, F.	Civil and Military Administration During the Reign of the Emperor Maurice	SSHRC	(INT) 02
TITTLER, R.	The Reformation and the Towns in England, 1340-1600	NEA	(EXT) 02

TRUDEL, G.	Analysis of Environmental Samples for Inorganic Chemical for National Water Quality Laboratories	CCIW	(EXT) 01

AINLEY, M.	Canadian Women and Scientific Work (STRATEGIC)	SSHRC	(EXT) 02
MAILLE, C.	Mise a jour des connaissances sur les nouvelles formes de participation politiques des femmes	SSHRC	(INT) 02
	Les formes non-traditionnelles de la participation politiques des femmes dans le contexte quebecois	FRDP	(INT) 02
RAZACK, S.	Echange bi-culturelle entre l'Institute Simone de Beauvoir et le programme d'etudes relative aux femmes, Trent University	MESS	(EXT) 02

CRYSLER, L.	SEE PERIGOE, R.		
PERIGOE, R.	Media Treatment of Mohawk Crisis in Quebec 1990 (L. Crysler)	SSHRC	(INT) 02

ALI, S.	Square Integrable Group Representations and Quantum Theory	NSERC	(EXT) 02
	SEE HARNAD, J.		
BOYARSKY, A.	Problems in Applied Ergodic Theory	NSERC	(EXT) 02
BRODY, J.	SEE HILLEL, J.		
BYERS, W.	Dynamical Properties of One-dimensional Maps	NSERC	(EXT) 02
CHAUBEY, Y.	Inference Problems in Inverse Gaussian Distribution, Analysis of Variance Models and Super Population Models	NSERC	(EXT) 02

CHAUBEY, Y	Statistical Analysis of Pre and Post Captopril Renogram in the Patients with Renovascular Arterial Hypertension	HSC	(EXT) 02
CUMMINS, C	Investigation of Properties of Group Representations	NSERC	(EXT) 02
	SEE KISILEVSKY, H		
DESROCHERS, M	Self-Duality of Rings of Integers as Galois Modules	NSERC	(EXT) 02
DUMMIT, D	Algebraic Number Theory	NSERC	(EXT) 02
	SEE KISILEVSKY, H		
DWIVEDI, T	Statistical Inf[illegible]ce in Linear Model	NSERC	(EXT) 02
ERLWANGER, S	SEE HILLEL, J		
GARRIDO, J	Diffusion Models for Risk Processes	NSERC	(EXT) 02
	Applications de l'analyse stochastique au contrôle des reserves des compagnies à risques	FCAR	(EXT) 02
GORA, P	Absolutely Continuous Invariant Measures and their Properties	FRDP	(INT) 02
HALL, R	Geometrical Methods in Theoretical Physics	NSERC	(EXT) 02
HARNAD, J	Integrable Hamiltonian System and Super Yang-Mills Theory (Ali, S.)	NSERC	(EXT) 02
	Théorie des champs et particules élémentaires (Bélanger, G., Letourneau, J., Paranjape, M., Saint-Aubin, Y. (Univ. de Mtl, Perroud, M. (Polytec., Vinet, L. (Univ. de Mtl	FCAR	(EXT) 02
	Work Station for Numerical, Graphical and Symbol Manipulation Computations	NSERC	(EXT) 03
HERSCOVICS, N	Portee cognitive des activites mathematiques au primaire dans une perspective constructiviste (Bergeron, J., Univ de Mtl)	FCAR	(EXT) 02
HILLEL, J	Using Computer Algebra Systems with Adult Learners	SSHRC	(EXT) 02
	Adult Learners and Mathematics: Cognitive Obstacles and Instructional Interventions (Brody, J., Erlwanger, S., Wheeler, D.)	FCAR	(EXT) 02
JOYAL, P	Limit Cycles in Planar Vector Fields	NSERC	(EXT) 02
KHALIL, Z	Blocking Times on Unreliable Server and Characterization Properties	NSERC	(EXT) 02
	On the Analysis of the Departure Process in a Model of a Telecommunication System with Retrial	NSERC	(INT) 20
KISILEVSKY, H	Centre inter-universitaire en calcul mathematique algebraique (Cummins, C., Ford, D., Lam, C., McKay, J.)	NSERC	(EXT) 03
	Algebraic Number Theory	NSERC	(EXT) 02

KISILEVSKY, H.	Computational Number theory and Algebra	DEC	(EXT) 03
	Centre inter-universitaire en calcul mathematique algebraique (CENTRE GRANT)	FCAR	(EXT) 02
	Theorie de Nombres (Dumont, D., Frei, G. - Laval; Labute, J. - McGill; Levesque, C. - Laval; Murty, R. - McGill; Russell, P. - McGill)	FCAR	(EXT) 02
RAPHAEL, R.	Algebraicity and Groups Underlying Rings	NSERC	(GNT) 20
	Topics in Rings and Abelian Groups	NSERC	(EXT) 02
SELDIN, J.	The Proof Theory of Dependent Function Types	NSERC	(EXT) 02
	SEE OKADA, M. (Computer Science)		
STERN, R.	Nonnegative Matrices: Theory and Applications	NSERC	(EXT) 02
SZABO, M.	Applications of Proof Theory to the Analysis of Programs	NSERC	(EXT) 02
WANG, Y.H.	On the Poisson and Compound Poisson Distributions and Processes	NSERC	(EXT) 02
WHEELER, D.	SEE HILLEL, J.		

ALLEN, P.	Women's Conceptual History 1880-1994	SSHRC	(EXT) 02
CLARKE, M.	Evolution, Cognition and Knowledge	FRDP	(INT) 02
MASON-MULLETT, S.	A Philosophical Analysis of Judicial and Quasi-Judicial Arguments Concerning Abortion and Child Support Awards	SSHRC	(EXT) 02
ROBINSON, J.	Plato's Epistemic Dilemma in the Timaeus	SSHRC	(INT) 02

FRANK, M.	Improved Calculation of B-decay Parameters in the Standard Model	NSERC	(INT) 02
	Phenomenological Supergravity Models Applied to (g-2) MO, Neutral Currents and CP Violation	NSERC	(EXT) 02
KALMAN, C.	Application of Supersymetric Field Theory to Calculations of Anomalous Magnetic Moments the Electric Dipole Moment of the Neutron Neutral Currents and CP Violation	NSERC	(EXT) 02
	Experimental Consequences of Supergravity	NSERC	(INT) 20
KIPLING, A.	Acoustic Wave Liquid-Phase Sensors	NSERC	(INT) 20
	A DNA Probe Biosensor Based on Acoustic Wave Transmission (STRATEGIC) (Thompson, M. - Univ of Totonto)	NSERC	(EXT) 02
MISRA, S.	EPR and ENDOR Investigations of Paramagnetic Ions in Single Crystals and Amorphous Materials	NSERC	(EXT) 02
VASILOPOULOS, P.	Quantum Transport in Restricted Geometries	NSERC	(EXT) 02

ANGELL, H.	Political Finance in Quebec	SSHRC	(INT) 02

GOLLNER, A.	A Comparative Assessment of the Linkages Between the Public and Private Management of Corporate Social Performance	SSHRC	(EXT) 02
KROKER, A.	The Possessed Individual	SSHRC	(INT) 02
LACHAPELLE, G.	Modelisation du mouvement de l'opinion (Cloutier, E. - Univ de Mtl, Guay, J. - Univ de Mtl, Nadeau, R. - Univ de Mtl)	SSHRC	(EXT) 02
MENDELL, M.	The Social Philosophy of Karl Polanyi: The Relevance to Contemporary Issues of Political Economy	SSHRC	(EXT) 02
SALEE, D.	1871 Canadian Census Project	SSHRC	(INT) 02
	Discourse and Management Practices in the Canadian Administrative States (1898-1998): A Sociohistorical Analysis	SSHRC	(INT) 02
TREMBLAY, R.	State Structures, Legitimacy and the Problematics of State Autonomy	CASA	(INT) 02

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AMIR, S.	Hypothalamic Control of Heat Generation in Brown Adipose Tissue in the Rat	NSERC	(EXT) 02
	SEE ENGLISH, A. M. (Chemistry)		
	SEE SHIZGAL, P.		
AMIT, Z.	Neurobehavioural Investigation of the Microstructure of Ethanol Consumption	NSERC	(EXT) 02
	Neuro-enzymatic Mechanisms Mediating Voluntary Ethanol Consumption (Aragon, C.)	MRC	(EXT) 02
	An Investigation of the Neurochemical, Genetic and Environmental Factors Mediating the Self-Administration of Drugs of Abuse (Aragon, C., Smith, B.)	FCAR	(EXT) 02
ARAGON, C.	SEE AMIT, Z.		
ARBUCKLE-MAAG, T.	Correlates and Consequences of Lifetime and Current Alcohol Consumption in Older Men (Chankelson, J., Gold, D.)	CDHW	(EXT) 02
	Canadian Aging Research Network (NETWORK OF CENTRES OF EXCELLENCE)	NCE MESS	(EXT) 02 (EXT) 02
	Aging and Memory: Comparison of Visual, Spatial and Verbal Domains	NSERC	(INT) 02
	Cognitive Function Research Work	UT	(EXT) 02
BARBEAU, J.	Etude tono-topographique des potentiels evoques auditifs	NSERC	(EXT) 02
	SEE SEGALOWITZ, N.		
BERGER, C.	Fluoxetine Treatment of Late Luteal Phase Dysphoric Disorder	ELIL	(EXT) 02
BRENDER, W.	Psychological Evaluation of Infertile Couples Participating in G.I.F.T. (Gamete Intrafallopian Transfer)	CQRS	(EXT) 02

BUKOWSKI, W.	Peer Relations and Adjustment: A Longitudinal Study of Outcomes and Processes in School-Age Children	WTGF	(EXT) 02
CHAIKELSON, J.	Psychological Research on Aging	ANOPC	(EXT) 02
	The Development of Age-Appropriate and Sex-Appropriate Testing Instruments for Use with Elderly People	SSHRC	(INT) 02
	SEE ARBUCKLE-MAAG, T.		
CONWAY, M.	Negative Effect and Reduced Cognitive Effort: Impact on Social Cognition and on Information Accessibility	SSHRC	(EXT) 02
DOYLE, A.-B.	Quality of Children's Friendships as a Function of Maternal Friendships, Acceptance and Marital Harmony (STRATEGIC)	SSHRC	(EXT) 02
	SEE SERBIN, L.		
GOLD, D.	Psychosocial Costs of Caregiving for Dementia Patients: A Longitudinal Study	CQRS	(EXT) 02
	Dementia at Home: A Longitudinal Study of Dementia Patients and their Caregivers (Cohen, C., Univ of Toronto)	CDHW	(EXT) 02
	Verbosity in Elderly People: An Examination of its Psychological significance (STRATEGIC)	SSHRC	(EXT) 02
	SEE ARBUCKLE-MAAG, T.		
GRATTON, A.	Mesures comportementale et électrochimique de la libération de la dopamine centrale induite par la nicotine	FCAR	(EXT) 02
	SEE WISE, R.		
KOMODA, M.	Etudes de la lecture dans une langue seconde (Poulin-Dubois, D., Segalowitz, N.)	FCAR	(EXT) 02
KRUK, R.	Temporal and Spatial Characteristics of Perceived Motion	NSERC	(EXT) 02
	Visual Contributions to Simulator Sickness	MRC CAE	(EXT) 02 (EXT) 02
	Evaluation and Rehabilitation of both the Neurologically Delayed Child and the Developmentally Delayed Child	ANOPC	(EXT) 02
LADD, H.	Quantitative Evaluation of Nerve/Muscle Function in the Neurologically Handicapped	PHHT	(EXT) 02
LAURENCE, J.-R.	Perceptual Automaticity and Hypnotizability	NSERC	(INT) 02
MILLER, S.	Family History of Hypertension, Salt Loading, and Cardiovascular Response to Extended Psychological Stress	PARKE	(EXT) 02
	The Effects of Psychological Stress on Autonomic Activity, Sodium Retention, and Cardiovascular Hemodynamics in Offspring of Hypertensives	MRC	(EXT) 02
	Motivational Mediators of the Cardiovascular	FCAR	(EXT) 02

	Response to Psychological Stress		
OVERBURY, O.	Early Diagnosis and Intervention in Glaucoma: A Comparison Among Psychophysical Techniques	CDHW	(EXT) 02
OVERBURY, O.	Perceptual Skills and Spatial Contrast Sensitivity: Plasticity and Visual Impairment	NSERC	(EXT) 02
PERRY, C.	Predicting Responses to Hypnosis	NSERC	(EXT) 02
POULIN-DUBOIS, D.	SEE KOMODA, M.		
ROCHFORD, J.	Role of Aversive and Appetitive Affective States in the Mediation of Changes in Pain Sensitivity	NSERC	(EXT) 02
	Investigations of Spinal Mechanisms Mediating Conditioned, Naloxone-Induced, and Stress-Induced Analgesia	FCAR	(EXT) 02
ROMPRE, P.-P.	Midbrain Dopamine Depolarization Inactivation: Behavioural Studies	MRC	(EXT) 02
	Substrats neuraux du renforcement intracerebral	FCAR	(EXT) 02
	Anatomie et physiologie des fibres mesencephaliques et rhombencephaliques responsables du renforcement intracerebral	NSERC	(EXT) 02
	SEE SHIZGAL, P.		
SCHWARTZMAN, A.	Childhood Risk Factors for Adult Mental Disorders	USHEW	(EXT) 02
SEGALOWITZ, N.	The Leonardo Project (Barbeau, J., Cohen, P.)	SEAG	(INT) 02
	SEE KOMODA, M.		
SERAGANIAN, P.	Alcohol and Cocaine Abusers at Treatment Intake and Follow-Up: Psychosocial and Family Dynamics	CQRS	(EXT) 02
	Comparison of Alcohol and Cocaine Abusers on Admission to Treatment and at One-Year Follow-Up Post Treatment	CDHW	(EXT) 02
SERBIN, L.	Les stereotypes sociaux et le rapport d'amitie: une approche developpemental (Doyle, A.-B., White, D.)	FCAR	(EXT) 02
	Centre for Research in Human Development (CENTRE GRANT)	FCAR	(EXT) 02
	Gender Concepts and Gender Segregation During the First Three Years of Life	SSHRC	(EXT) 02
	Gender Constancy and Gender Concepts: When do Children Understand that Gender is Unchangeable?	SSHRC	(INT) 02
SHIZGAL, P.	Neural Substrate for Brain Stimulation Reward	MRC	(EXT) 02
	Neural Mechanisms Subserving Behavioural and Psychological Contributions to Homeostasis in the Rat (Amir, S., Rompre, P.-P.)	FCAR	(EXT) 02
	Psychophysical Studies of Brain Stimulation Reward	NSERC	(EXT) 02
SMITH, B.	SEE AMIT, Z.		
STACK, D.	Tactile Stimulation as a Component of Social Interchange in Caregiver-Infant Interactions	FRDP	(INT) 02
STEWART, J.	Centre for Studies in Behavioural Neurobiology (CENTRE GRANT)	FCAR	(EXT) 02

	Conditioned Physiological Changes to Repeated Administration of Psychoactive Drugs	MRC	(EXT) 02
STEWART, J.	Hormonal, Experiential and Neural Determinants of Sex Differences in Behaviour	NSERC	(EXT) 02
	Coulometric Electrochemical Detector for High Performance Liquid Chromatography (HPLC)	NSERC	(EXT) 03
	SEE WISE, R.		
TAYLOR, N.	A Study of Longterm Memory in Preterm and Fullterm Infants with the Mobile Conjugate Reinforcement Paradigm	ANOPC	(EXT) 02
TESSIER, O.	Une etude des contraintes sociales dans le developpement des activites ludiques symboliques (STRATEGIC)	SSHRC	(EXT) 02
VON GRUNAU, M.	Psychophysical Investigations of Human Motion Systems	NSERC	(EXT) 02
WHITE, D.	Evaluation des enfants dans deux milieux: maternelle et service de garde en milieu scolaire (Baillargeon, M. - Laval, Bernadel, R. - Univ. de Mtl, Jacobs, E.)	CDHW	(EXT) 02
	SEE SERBIN, L.		
WISE, R.	MFB Motivational Mechanisms	NSERC	(EXT) 02
	Neural Regeneration and Functional Recovery (NETWORK OF CENTRES OF EXCELLENCE)	MRC MESS	(EXT) 02 (EXT) 02
	Brain Dopamine and Behaviour (Gratton, A. - Stewart, J.)	FCAR	(EXT) 02
	Neural Substrate of Cocaine Abuse	USHEW	(EXT) 02
WOODSIDE, B.	Hormonal Effects on Diet Selection and Homeostatis during Pregnancy and Lactation in the Rat	NSERC	(EXT) 02
	Factors Mediating the Effects of Food Restriction on the Duration of Lactational Acyclicity in Rats	MRC	(EXT) 02

Religion

COLLINS, S.	A Social History of the Buddhist Nirvana	ANOPC	(EXT) 02
DESPLAND, M.	La religion a partir du XIXe siecle	CC	(EXT) 20
HOFBECK, J.	Individualisme et solidarite (Baum, C. - McGill, Boutin, M. - Univ de Mtl, Dumas, B. - Univ de Mtl, Lane, G. - Univ de Mtl, Prades, J. - Univ de Mtl, Vaillancourt, J. - Univ de Mtl)	FCAR	(EXT) 02
OPPENHEIM, M.	Mutual Upholding: Fashioning Philosophy through Letters	SSHRC	(INT) 02
ROBINSON, I.	Cyrus Adler: The Biography of an American Jew	SSHRC	(EXT) 02

Social Sciences

MENDELL, M.	In Support of the Karl Polanyi Institute of Political Economy	CP	(EXT) 02

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CHODAK, S.	Social Change, Growth and Development: State and Market Interplay in the Three Systems of the World	SSHRC	(EXT) 02
GRENIER, L.	Genese de la forme-chanson au Quebec: Documentation ecrite, sonore et visuelle	SSHRC	(INT) 02
	Musique espaces-temps et alterite	SSHRC	(EXT) 02
IRVINE-DRYSDALE, S.	Current Pedagogy in Canadian Sociology	SSHRC	(INT) 02
JUNASSOHN, K.	in Support of the Montreal Institute for Genocide Studies	ANOPC	(EXT) 02
LEGROS, D.	Fort Selkirk Yukon Tutchone Indians in 1843-1852	SSHRC	(EXT) 02
LUSTIGER-THALER, H.	Action, Politics and New Public Spaces	SSHRC	(EXT) 02
	Post-genocide Analyses: The Case of the Liberated Bergen Belsen Camp as a form of Political, Social, and Cultural Life	SSHRC	(INT) 02
REIMER, W.	Analysis of Parish Study	ANOFC	(EXT) 01
SHAVER, F.	Female, Male and Transgender Prostitution in Tenderloin: The Data Analysis - Phase III	SSHRC	(INT) 02
	Challenging our Views - Prostitution in Canada	SSHRC	(EXT) 02
SMUCKER, J.	Study of Labour Market Policies in Canada and Sweden	SSHRC	(INT) 03
	The Effects of Labour Market Policy on the Attitudes and Behaviours of Workers and Employers: A Canada, Sweden, Italy Comparison (Mass, A. - McGill, Smith, M. - McGill, Van Den Berg, A. - McGill)	FCAR	(EXT) 02
	Labour Market Policies and Economic Changes: A Comparison between Sweden and Canada (Mass, A. - McGill, Smith, M. - McGill, Van Den Berg, A. - McGill)	SSHRC	(EXT) 02

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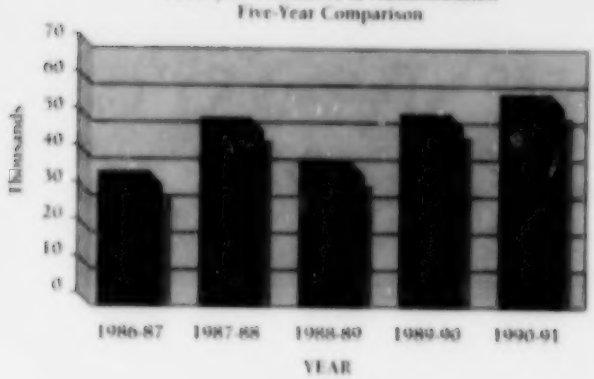
BELMORE, N.	Word Classification for Natural Language Understanding Systems	SSHRC	(INT) 02
LIGHTBOWN, P.	L'apprentissage et l'enseignement des langues secondes dans des programmes innovateurs (Upshur, J. - Spada, N. - McGill)	FCAR	(EXT) 02
	The Effect of Form-Focused Instruction on the Second Language Development of Learning in Communicative Programmes (Spada, N. - McGill, White, L. - McGill)	SSHRC	(EXT) 02
MACKAY, R.	Formative Evaluation of the Multicultural/ Multiracial Leadership Program	ANOFC	(EXT) 01
UPSHUR, J.	SEE LIGHTBOWN, P.		

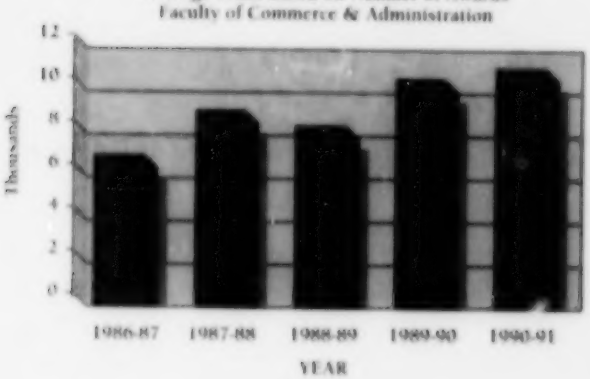
The Faculty of Commerce and Administration continues to be a productive and innovative faculty whose research activities reflect both academic excellence and the real-world concerns of the business sector. Faculty in all departments have successfully competed for funds from both federal and provincial governments, and from the private sector. This activity has resulted in a record number of faculty publications in academic journals and participation in international and national meetings.

This Directory illustrates the diversity of research interests of our faculty. Research in the area of commerce covers many topics using a variety of tools and perspectives. The Faculty of Commerce continues to provide innovative approaches to research which meets the needs of an increasingly competitive business environment. ■

Faculty of Commerce & Administration
Five-Year Comparison



Average Grant Based on Number of Awards
Faculty of Commerce & Administration



FACULTY OF COMMERCE & ADMINISTRATION

Accounting

ALY, I.	The Usefulness of Supplementary Financial Disclosures in Identifying Corporate Takeover Targets: An Empirical Study	SSHRC	(INT) 02
	SEE GHEYARA, K.		
GHEYARA, K.	Incentive Schemes, Uncertainty and Decision Making Processes: An Experimental Test of the Core Theory (Aly, I.)	FRDP	(INT) 02
IBRAHIM, M.	An Empirical Examination of Decision Weights and Risky Choices	FRDP	(INT) 02
	Auditor Configural Cue Usage in Internal Control Risk Assessment	SSHRC	(INT) 02
	Sequential and Simultaneous Audit Judgment	SSHRC	(EXT) 02
KIM, J.B.	The Usefulness of Cash Flows Versus Accrual Earnings for Valuing Share Prices	CASA	(INT) 02
	Towards a New Method of Accounting for Hazardous Wastes: An Empirical Investigation	FRDP	(INT) 02
	Joint Determinants of Price and Volume Changes Around Earnings Disclosure: Empirical Tests	SC	(INT) 02

Business

BOURBEAU, J.	Quadratic 0-1 Programming: Design of Algorithms and Implementation	NSERC	(EXT) 02
	Logiciels d'optimisation pour problèmes de grande taille	FCAR	(EXT) 02
ETEZADI-AMOLI, J.	Measurement and Evaluation of End User Computing Satisfaction	SSHRC	(EXT) 02
FARHOOMAND, A.	Human Computer Interaction Laboratory	DEC	(EXT) 03
GOYAL, S.	Determination of a Supplier's Economic Manufacturing Policy	NSERC	(EXT) 02
KHALIFA, M.	A Study of Attitudes of Small Businesses Toward Telecommuting: Success Factors	SC	(INT) 02
	A System Description Management System (SDMS)	SSHRC	(INT) 02
KIRA, D.	Strategic Information Planning Model	CASA	(INT) 02
MAK, T.	Functional Relationships and Related Models	NSERC	(EXT) 02
MORIN, D.	Distributional Problems Related to Functions of Quadratic Forms	NSERC	(EXT) 02
	The Impact of OPEC on Oil Stock Prices: Event Analysis	CASA	(INT) 02

NEBEBE, F.	Bayes Empirical Bayes Shrinkage Estimation in Lognormal Models	NSERC	(EXT) 02
PEDERZOLI, G.	Cost Allocation Models	NSERC	(EXT) 02
	Études de points distribués aléatoirement: théorie et applications (Anderson, W. - McGill, Mathai, A. - McGill, Sancho, N. - McGill)	FCAR	(EXT) 02
POLITOV, T.	Efficient Algorithms for Network Reliability Computations	NSERC	(EXT) 02
FINANCE			
ANVARI, M.	Electronuda Data Interchange & Inventories	NSERC	(EXT) 02
BRODT, A.	A Network Programming Model for International Bank Asset and Liability Management	SSHRC	(INT) 02
JAIN, A.	Adaptation to Discontinuous Change: A Typology of Strategies	FRDP	(INT) 02
	Economic and Political Determinants of Commercial Banks' Lending to Developing Countries	SSHRC	(EXT) 02
	Agency Theory, Corruption and Debt Crisis	CASA	(INT) 02
KRYZANOWSKI, L.	Asset Pricing Models: Theory, Empirical Tests and Applications (Switzer, L., Tao, M. - H.E.C.)	FCAR	(EXT) 02
	Market Microstructure and Trading Halt	CASA	(INT) 02
	Tax-Assisted Small-Business Financing: Risk and Return Performance of QSSP Issues	SC	(INT) 02
NADER, J.	A Study of Retirement Incentives in Canadian Corporate Pension Plans	SSHRC	(INT) 02
PARK, T.	Corporate Interest Rate Swap Decisions: An Econometric Analysis	SSHRC	(INT) 02
	Adjustable-Rate Mortgages and Mortgage-Backed Securities	FRDP	(INT) 02
SHANKER, L.	Margin Requirements, Price Limits, Volatility and Liquidity in Future Markets	CASA	(INT) 02
	Determinants of Corporate Financial Policy: A Comparative Economic Analysis of Canada and Turkey	FRDP	(INT) 02
SWITZER, L.	SEE KRYZANOWSKI, L.		
MANAGEMENT			
ASHFORTH, B.	Organizational Socialization and the Adjustment of Newcomers	FCAR	(EXT) 02
BABA, V.	Les liens individu-organisation, leurs antécédents, leurs processus et leurs conséquences (Jamal, M., Johns, G.)	FCAR	(EXT) 02
	Burnout Among Nurses: Antecedents and Consequences	SSHRC	(EXT) 02
JAMAL, M.	SEE BABA, V.		
JOHNS, G.	Constraints on Work Absence and Attendance	SSHRC	(EXT) 02
	SEE BABA, V.		

McGUIRE, J.	Executive Compensation, Firm Strategy and Firm Performance (STRATEGIC)	SSHRC	(EXT) 02
SAKS, A.	An Examination of Self and Collective Efficacy	CASA	(INT) 02
TAYLOR, W.	Gestion strategique des PME: Condition des succes dans un nouveau contexte mondiale (STRATEGIC) (D'Amboise, G. - Laval; Dionne, A. - Laval; Garnier, B. - Laval; Gasse, Y. - Laval)	SSHRC	(EXT) 02

Marketing

BUYUKKURT, B.	Metric Conjoint Analysis of Preference Judgements Using a Robust and Hierarchical Bayesian Model with Ordinal Constraints	SSHRC	(EXT) 02
HUI, M.	Effects of Perceived Control and Attributions on Consumers' Reactions to the Service Encounter	SSHRC	(INT) 02
JOY, A.	Corporate Patronage of the Arts and Corporate Image: Implications for Marketing	SSHRC	(EXT) 02
	Weavers of Guatemala: Culture, Heritage and Economic Development (Lipke, K.)	FRDP	(INT) 02
	SEE LAROCHE, M.		
KIM, C.	The Effect of Country-of-Origin on Market Shares: An Econometric Model and its Application to the Automobile Market	CASA	(INT) 02
	Analyzing the Structure and the Patterns of Competition in U.S. and Canadian Automobile Markets	FRDP	(INT) 02
	SEE LAROCHE, M.		
LAROCHE, M.	Etude experimentale de la relation entre appartenance culturelle et comportement de consommation (Joy, A., Kim, C.)	FCAR	(EXT) 02
	Analysis of the Effects of Attitudinal and Behavioural Dimensions of Subculture on Consumption Behaviour in Canada	SSHRC	(EXT) 02
McGOWN, K.L.	Pharmaceuticals at Management's Corner: Feasibility Research - Phases II and III	CIBA SAND	(EXT) 01 (EXT) 01
PASOLD, P.	The Development of Marketing Simulations	ANOCC	(EXT) 02

The Faculty of Engineering and Computer Science continues to conduct research in the major disciplines of Building Studies, Civil Engineering, Computer Science, Electrical and Computer Engineering, and Mechanical Engineering.

The Faculty has also placed emphasis on specific research programs to reflect demands arising from rapid technology development in the following areas: Indoor environment, building performance, computer applications in transportation, geotechnical engineering, environmental impact, pattern recognition, machine intelligence, VLSI architecture, intelligent systems and robot control, image/signal processing, power electronics, fibre optic communication networks, advanced VLSI design and testing techniques, computer integrated manufacturing, composite materials, vehicle dynamics, knowledge based diagnostics and reliability.

The Faculty has established the following research centres to promote successful, ongoing university/industry linkages.

Centre for Building Studies (CBS)

The **Centre for Building Studies**, established in 1977, is unique in the country and reflects Concordia's response to the needs of the construction industry, one of the largest in Quebec. Supported by funding from government and industry, CBS is involved in all aspects of R&D related to building enclosures and services.

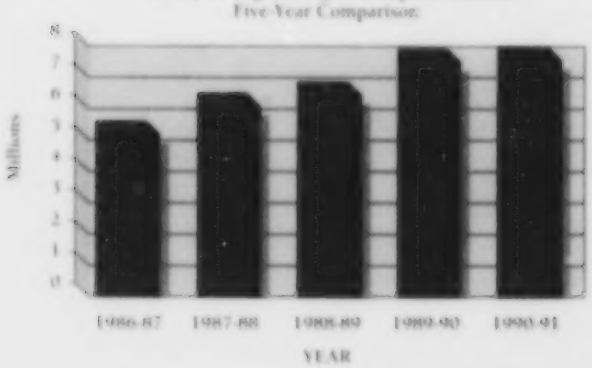
Centre for Industrial Control (CIC)

CIC conducts R&D of industrial types of control and automation with special emphasis on real time microprocessor control of mechanical systems, including intelligent robotic workcells with camera vision, low cost flight simulators, training units for the physically handicapped, fuel control systems, electrohydraulic servosystems, and computer integrated manufacturing and assembly.

Centre for Pattern Recognition and Machine Intelligence (CENPARMI)

CENPARMI conducts studies on expert systems, recognition and image enhancement techniques applied to process documents and data forms, envelopes, deposit slips, utility bills, engineering drawings, maps, fingerprints, and others.

Faculty of Engineering & Computer Science
Five-Year Comparison



Centre for Signal Processing and Communications (CENSIPCOM)

Researchers in this Centre are engaged in the investigation of mathematical foundations and practical implementations of a wide range of problems in signal processing and communications: structural signal processing (beamforming and sonar arrays); design, implementation, and stability problems of multidimensional digital systems; parallel algorithms and architectures for low and high level image processing; spread-spectrum; modulation and coding; ISDN.

Concordia Computer-Aided Vehicle Engineering (CONCAVE)

This research Centre was established through an Actions Structurantes grant from the Government of Quebec. Through the use of its state-of-the-art equipment, the centre carries out projects for industry and government, including advanced laboratory and field testing of vehicles; computer simulation; development of computer software for optimal design and systematic analytical development in vehicle engineering.

The Faculty participates actively as a partner in the following research centres/organizations:

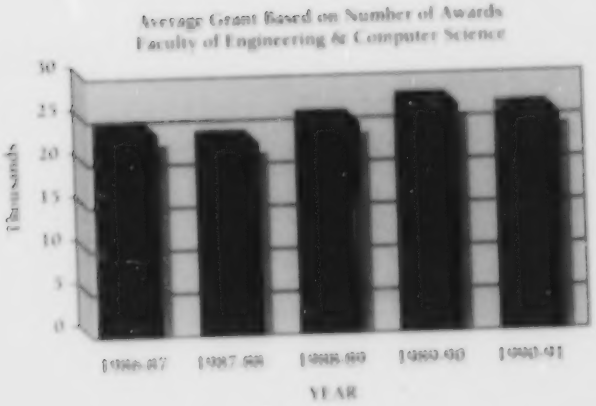
Centre for Algebra, Number Theory and Computation (CICMA)
At this newly formed Centre, computers are used to solve long-standing problems in classical pure mathematics. The Centre is part of a recent trend that has seen an enormous shift among mathematicians to the use of computers for solving highly complex problems. By bringing together the fields of mathematics and computer science, both disciplines benefit from the mutual stimulus. Mathematicians are able to solve their problems much faster and more efficiently with the use of computers; computer scientists have the challenge of applying computer skills to explore high-powered theoretical notions in mathematics.

Inter-University Centre in High Performance Computer Architecture and VLSI
The primary objective of this Centre is the promotion of advanced research in design methodologies and CAD tools for highly dependable microelectronic circuits and systems and their application in the design of high performance architectures and computing.

Computer Integrated Manufacturing Centre (CIMCENTRE)
The Faculty is an active participant in CIMCENTRE, a specialized unit of the Centre québecois pour l'informatisation de la production (CQIP).

Centre de recherche informatique de Montreal (CRIM)
The Departments of Electrical and Computer Engineering, and Computer Science are linked with this Centre, a consortium of four Montreal universities - Concordia, Universite de Montreal, Universite du Quebec a Montreal, and McGill University.

Societe d'informatique et de recherche pour l'industrie de la construction (SIRICON)
This non-profit corporation performs research and development work related to computer applications for the construction industry. ■



FACULTY OF ENGINEERING & COMPUTER SCIENCE

C.B.S.

ATHIENITIS, A.	Modeling of Building - HVAC Dynamics and its Use for Energy Management	NSERC	(EXT) 02
	Investigation of Building Thermal Dynamics and Performance-Based Control	FCAR	(EXT) 02
	Test Room for Computer-Controlled Heating and Building Thermal Studies	NSERC	(EXT) 03
	SEE FAZIO, P.		
BEDARD, C.	Projet de promotion des transfers technologiques entre le Canada et le Maroc	APPUI	(EXT) 01
	Integration Model for the Preliminary Engineering Design of Buildings	NSERC	(EXT) 02
	SEE FAZIO, P.		
BOUBEKRI, M.	Window Design Strategies: Glare and Daylighting Implications	FRDP	(INT) 02
EL-DIASTY, R.	Quantitive Basis for Improved Design of Building Envelopes	NSERC	(EXT) 02
	SEE FAZIO, P.		
FAZIO, P.	Building Enclosure Systems and their Components: Planning, Design and Construction (Athienitis, A., Bedard, C., El-Diasty, R., Feldman, D., Marsh, C., Moselhi, O., Stathopoulos, T.)	FCAR	(EXT) 02
	Performance of Building Systems, Components and Processes	NSERC	(EXT) 02
	Centre for Building Studies (CENTRE GRANT)	FCAR	(EXT) 02
	Projets de recherche et developpement d'outils d'analyse et de conception appliquees aux batiments et a leur environnement (ACTIONS STRUCTURANTES)	MESS	(EXT) 02
	Computer Facilities for Research in Building Engineering (INFRASTRUCTURE) (Athienitis, A., Bedard, C., Haghighat, F., Marsh, C., Stathopoulos, T., Zaheeruddin, A.)	NSERC	(EXT) 20
FELDMAN, D.	Organic Polymers in Energy Conservation	NSERC	(INT) 02
	Lignin as a New Component for Building Materials	CASA	(INT) 02
	Polymers for Energy Conservation and Solar Energy Applications	NSERC	(EXT) 02
	SEE FAZIO, P.		

GUY, R.	Measurement and Prediction of Sound Transmission in Finite Surrounds	NSERC	(EXT) 02
	Acoustique interieure: caracterisation analytique et experimentale des patios et des locaux (Champoux, Y. - Sherbrooke; Daigle, G. - Sherbrooke; Hodgson, M. - Sherbrooke; Nicolas, J. - Sherbrooke)	FCAR	(EXT) 02
HA, H.K.	Structural Systems and Components	NSERC	(EXT) 07
HAGHIGHAT, F.	Development of a Model to Assess the Effects of Wind Turbulence on Natural Ventilation Air Change Rates	CEMR NSERC	(EXT) 02 (EXT) 02
	Development of Indoor Air Quality Model Using CFD	CASA	(INT) 02
	Air Quality and Thermal Comfort - Development of a Model for Predicting Air Movement in Buildings (Zaheeruddin, M.)	FCAR	(EXT) 02
	Quantitative Bases for Improving the Design of HVAC Systems	NSERC	(EXT) 02
	Three Dimensional Analysis of Air Flow and Contaminants Distribution in a Two-Zone Ventilated Enclosure - Numerical and Experimental	FCAR	(EXT) 02
	SEE FAZIO, P.		
	SEE STATHOPOULOS, T.		
MARSH, C.	Nonlinear Analysis of Structure up to Collapse	NSERC	(EXT) 02
	SEE FAZIO, P.		
MOSELHI, D.	Automation in Construction/Project Management	NSERC	(EXT) 02
	SEE FAZIO, P.		
SAATHOFF, P.	Modeling of Pollutant Dispersion from a Ground-Level Area Source near Buildings	FRDP	(INT) 02
STATHOPOULOS, T.	Wind Effects on Buildings and Their Codification (Haghighat, F.)	NSERC	(EXT) 02
	Laser Doppler Anemometer for Wind Tunnel Flow Measurements	NSERC	(EXT) 03
	SEE FAZIO, P.		
WANG, J.	Study of CFC Substitutes and Heat Pipe/ PCM Thermal Storage	NSERC	(EXT) 02
ZAHEERUDDIN, M.	Decentralized Control Strategies for Indoor Environment	CASA	(INT) 02
	Optimized Microprocessor Control Strategies for Buildings	NSERC	(EXT) 02
	Implementable Sub-Optimal Control Strategies for Variable Air Volume Systems	CEMR	(EXT) 02
	SEE FAZIO, P.		
	SEE HAGHIGHAT, F.		
ZMEUREANU, R.	Design of Energy-Efficient Buildings	NSERC	(EXT) 02
	Impact of the New ASHRAE Standard 90.1 on the Design of Energy-Efficient Office Buildings in Canada	NSERC CEMR	(EXT) 02 (EXT) 02

ASHTAKALA, B.	Sequential Models for Transportation of Hazardous Materials and Wastes	NSERC	(EXT) 02
BUDKOWSKA, B.	Constitutive Equations for Frozen Soils and Analysis of Piles Embedded in Frozen Soils	NSERC	(EXT) 02
CARBALLADA, I.	Integrated Planning and Operations on a Mainly Hydro Energy System	NSERC	(EXT) 02
DOUGLASS, M.	Performance of Nearshore Platforms Considering Non-Linear Soil Structure Interactions During Storms	ERDP	(INT) 02
HANNA, A.	Parametric Study on Pile Foundations in Sand	NSERC	(EXT) 02
LU, Y.	Application of Image Analysis to Traffic Monitoring Systems	NSERC	(EXT) 02
PEKAU, O.	Seismic Cracking of Dams	CASA	(INT) 02
	Seismic Performance and Design of Structures	NSERC	(EXT) 02
	Constitutive Model for Concrete	FCAR	(INT) 02
	Computer-Aided Structural Design	CASA	(INT) 02
	SEE ZIELINSKI, Z.		
POOROOSHASB, H.	Constitutive Laws and Their Application to Geotechnical Engineering	NSERC	(EXT) 02
	Iceberg Scour	NSERC	(INT) 02
	Quantification of Seabed Damage due to Ice Scour (STRATEGIC GROUP) (Clark, J. - Memorial, Poorooshasb, F. - Memorial, Salvadurai, A. - Carleton)	NSERC	(EXT) 02
RAMAMURTHY, A.	Characteristics of Lateral Flows a) Branching Flows b) Junction Flows	NSERC	(EXT) 02
SARRAF, S.	Modeling River Flow Conditions Leading to Spring Ice Jamming	NSERC	(EXT) 02
	Modélisations mathématiques de l'hydrodynamique de la fonte, de la rupture et du déplacemetit des glaces dans les lacs et les rivières (Baliga, B. - McGill, Chu, V. - McGill)	FCAR	(EXT) 02
SENEVIRATNE, P.	Models for Evaluating Transportation System Performance	NSERC	(EXT) 02
	Programme Multidimensionnel en sécurité routière (Bass, K. - Polytech, Bergeron, J. - Univ de Mtl, Bodson, P. - UQAM, Brown, B. - McGill, Laberge-Nadeau, C. - Univ de Mtl)	FCAR	(EXT) 02
TROITSKY, M.	Analysis and Design of Steel Bridges by Prestressing	NSERC	(EXT) 02
	SEE ZIELINSKI, Z.		
ZIELINSKI, Z.	Thin Wall Panel/Module Segmental Structures	NSERC	(EXT) 02
	Seismic Cracking of Dams	NSERC	(INT) 02
	Performance Evaluation and Design of New and Conventional Structural Systems (Pekau, O. - Troitsky, M.)	FCAR	(EXT) 02

ALAGAR, V.	Studies in Formal Aspects of Computing	NSERC	(EXT) 02
	Integrated Knowledge-Based Design Environment – A Research into Critical Feasibility Issues (Goyal, P., Lakshmanan, V., Sadri, F.)	FCAR	(EXT) 02
	SEE LI, H.F.		
ATWOOD, J.W.	Transfer Protocols for Distributed Systems	NSERC	(EXT) 02
BUI, T.	Techniques de calcul scientifique à grande échelle et applications (Doedel, E., Habashi, W.)	FCAR	(EXT) 02
	Efficient Algorithms for Numerical and Combinatorial Problems	NSERC	(EXT) 02
	Non-Linear Shape Transformation	NSERC	(INT) 02
DOEDEL, E.	Numerical Analysis and Control of Bifurcation Problems	NSERC	(EXT) 02
	Project AUTO 92	ANSYNC	(EXT) 01
	SEE BUI, T.		
FORD, D.	Development of Algorithms in Algebra and Number Theory	NSERC	(EXT) 02
	SEE LAM, C.		
	SEE KISILEVSKY, H. (Mathematics)		
GOYAL, P.	Object-Oriented Databases: Extensions for Design and Software Engineering	NSERC	(EXT) 02
	SEE ALAGAR, V.		
	SEE LI, H.F.		
GROGONO, P.	A Development Environment for Verifiable Software	FEDP	(INT) 02
	SEE ORADA, M.		
JAYAKUMAR, R.	Synthesis and Design Automation of High Performance VLSI Architectures	NSERC	(EXT) 02
	SEE LI, H.F.		
	SEE SUEN, C.		
KASVAND, T.	SEE SUEN, C.		
KLASA, S.	Combined Applications of Harmonic Analysis, Fractal Theory and Ludic Computation to Pattern Recognition	FEDP	(INT) 02
KRZYZAK, A.	Image Processing Using Neural Networks	NSERC	(INT) 02
	Pattern Recognition and Modeling of Complex Systems Using Nonparametric Approach	NSERC	(EXT) 02
	SEE SUEN, C.		
LAKSHMANAN, V.	Graphlog: Logic Programming with Graphical Databases	NSERC	(EXT) 02
	Complexity and Expressive Power of Query and Update Languages in Deductive Databases	FCAR	(EXT) 02
	SEE ALAGAR, V.		

	Project Title	Agency	Type
LAM, C.	High Performance Workstation	CASA	(INT) 03
	Solving Combinatorial Problems by Computer	NSERC	(EXT) 02
	Concordia University Mathematical Computing Laboratory (INFRASTRUCTURE) (Ford, D., McKay, J.)	NSERC	(EXT) 20
	Computational Mathematics	NSERC	(INT) 02
	Efficient Gambling Strategies	LOTO	(EXT) 02
	Using Computers to Solve Mathematical Problems (Ford, D., McKay, J., Opatrny, J.)	FCAR	(EXT) 02
	Equipment for Large Scale Algebraic and Scientific Computation	DEC	(EXT) 03
	SEE LI, H.F.		
	SEE KISILEVSKY, H. (Mathematics)		
LI, H.F.	VLSI Research	CMEC	(EXT) 03
	Analysis and Synthesis of Delay Insensitive VLSI Circuits and Systems (MICROELECTRONICS GROUP)	NSERC	(EXT) 02
	Concordia University Distributed Computing Research Laboratory (INFRASTRUCTURE) (Alagar, V., Goyal, P., Jayakumar, R., Lam, C., Probst, T., Radhakrishnan, T., Sadri, F.)	NSERC	(EXT) 20
	Conception et validation hierarchiques de systemes VLSI (Jayakumar, R., Probst, D.)	FCAR	(EXT) 02
	Parallel and Distributed Processing Algorithms and Systems	NSERC	(EXT) 02
	SEE SUEN, C.		
LI, Z.C.	Domain Methods and Parallel Algorithms for PDE	NSERC	(EXT) 02
	Research on Parallel Algorithms for PDE and Applications	FCAR	(EXT) 02
McKAY, J.	Development of Computational Techniques in Abstract Algebra	NSERC	(EXT) 02
	SEE LAM, C.		
	SEE KISILEVSKY, H. (Mathematics)		
OKADA, M.	Recursion et preuves (COOPERATION FRANCE-QUEBEC)	MRIAI	(EXT) 02
	New Programming Tools and Concepts based on Intuitionistic Type Theory and Universal Algebra (Gregoire, P., Seldin, J.)	FCAR	(EXT) 02
	Application of Logic to Programming Language and Theorem Proving	NSERC	(EXT) 02
	Application of Logic to Computer Science	FCAR	(EXT) 02
OPATRNY, J.	Graph Theory	NSERC	(INT) 02
	Construction of Large, Fault-Tolerant Network Models	NSERC	(EXT) 02
	SEE LAM, C.		

PRASAD, D.	Design and Validation of Asynchronous VLSI Systems	NSERC	(EXT) 02
	SEE LI, H.F.		
RADHAKRISHNAN, T.	Distributed Processing and Man-Machine Communication	NSERC	(EXT) 02
	Distributed Simulation of a Network of Distributed Service Engines	BNR	(EXT) 02
	SEE LI, H.F.		
	SEE SUEN, C.		
SADRI, F.	The Temporal Object-Oriented Database System	NSERC	(EXT) 02
	SEE ALAGAR, V.		
	SEE LI, H.F.		
SHINGHAL, R.	Optical Character Recognition and Text Processing	NSERC	(EXT) 02
	Verification and Validation of Expert Systems	NSERC	(INT) 02
	SEE SUEN, C.		
SUEN, C.	Validation and Verification of Expert Systems - Phase II	BC	(EXT) 01
	Prototyping a Multiple-Expert OCR Machine (STRATEGIC GROUP) (Javakumar, R., Krzyzak, A., Li, H.)	NSERC	(EXT) 02
	Knowledge-Based Systems (NETWORK OF CENTRES OF EXCELLENCE)	NSERC MESS	(EXT) 02 (EXT) 02
SUEN, C.	Computer Recognition of Characters and Digitized Patterns, and their Applications	NSERC	(EXT) 02
	Segmentation des images, reconnaissance des formes, et traitement des documents (Kasvand, T., Krzyzak, A., Radhakrishnan, T., Shinghal, R.)	FCAR	(EXT) 02
	Evaluation of Expert Systems	NSERC	(INT) 02
TAO, L.	Spare Station SLC	NSERC	(EXT) 03
	Program Mapping for Improving Parallel Software Portability	NSERC	(EXT) 02
	Discrete Optimization for Parallel Processing and VLSI	CASA	(INT) 02

Electrical & Computer Engineering

AHMAD, M.	Multidimensional Signal and Image Processing and their Implementation using VLSI and Multi-processor Architectures	NSERC	(EXT) 02
	SEE SWAMY, M.N.S.		
AL-KHALILI, A.	An Integrated CAD Tool for Optimized IC Synthesis A Systematic Approach for Designing Fault Tolerant Systolic Architecture	NSERC	(EXT) 02
	VLSI Research	CMICC	(EXT) 03
	SEE KHORASANI, K.		
	SEE PATEL, R.		

ALI-KHALIEL, D	Automodelling of High Performance CMOS Cell Libraries	NSERC	(EXT) 02
BENYAMIN-SEEYAR, A	Forward Error-Correcting Capability of Error-Trapping Technique for Cyclic Codes	NSERC	(EXT) 02
BHATTACHARYYA, B	Analysis and Design of Analog and Digital Electrical Networks	NSERC	(EXT) 02
COMEAU, M	Distributed Protocol Design, PLA Folding and Performance Studies for Communication Networks	NSERC	(EXT) 02
ELHAKEEM, A	A Token Ring Adapter for the 16 Mb/s N.T. Twisted Pair LAN	ANOCC	(EXT) 02
	Codulation and Access Techniques for Secure Wideband Networks	NSERC	(EXT) 02
	A Study of Suitable Access Protocols for a Hubless VSAT Satellite Network Operating in an Integrated Digital Services Environment	SPAR	(EXT) 02
	Efficient Spread Spectrum Multiple Access Techniques and Applicable Modulation Coding	CASA	(INT) 02
	SEE LE-NGOC, T.		
FARUQUE, S.	1) VLSI Systems 2) An Improved S to Z Transformation	NSERC	(EXT) 02
GRACOVETSKY, S.	The Cervical Spine - Expert System for Evaluating the Pathology Based Upon Non-Invasive Measurement	NSERC	(EXT) 02
HAROUN, B.	High Level Synthesis and Implementation of VLSI Architectures for DSP, Numerical and Neural Network Applications	NSERC	(EXT) 02
HAYES, J.	Studies of Optical Communications Systems (Mehmet Ali, M.)	NSERC	(EXT) 02
	Broadband Oscilloscope	NSERC	(EXT) 03
	Research in Broadband Communications	BNR	(EXT) 02
	Canadian Institute for Telecommunications Research Network (NETWORK OF CENTRES OF EXCELLENCE)	NSERC MESS	(EXT) 02 (EXT) 02
	Optical Fibre Local Backbone Networks (COOPERATIVE R&D GRANT WITH NSERC)	MEMOT	(EXT) 02
	Protocol Development and Performance Analysis on Optical Fiber Local Backbone Network (Mehmet Ali, M., Sarikaya, B.)	FCAR	(EXT) 02
JOOS, G.	Power Electronic Control of Electrical Drives	NSERC	(EXT) 02
	SEE ENSTSAY, J.		
	SEE ZIOGAS, P.		
KHORASANI, K.	Modeling and Control of Large Scale Nonlinear Systems (Al-Khalili, A., Patel, R.)	NSERC	(EXT) 02
	A Delta II Neurocomputer Floating Point Processor	NSERC	(EXT) 03
	Mathematical Modeling and Control of Large Scale Systems with Applications to Flexible Joint Robots	FCAR	(EXT) 02

KROLIK, J.	High Resolution Broadband Beamforming via Focussing Techniques	CDND	(EXT) 01
	High Resolution Multiple Broadband Source Location	NSERC	(EXT) 02
	Efficient High Resolution Beamforming for Broadband Sonar Arrays	FCAR	(EXT) 02
	SEE SWAMY, M.N.S.		
KUBINA, S.	Electromagnetic Compatibility Analysis Techniques for Aircraft Antennas - Phase III	CDND	(EXT) 01
	Aircraft Electromagnetic (EMC) Prediction Techniques - Phase III	CDND	(EXT) 01
	EMC Laboratory (INFRASTRUCTURE) (Paknys, R., Trueman, C.)	NSERC	(EXT) 20
	HF Scattering Models of Ships and Aircraft - Phase II	CDND	(EXT) 01
	Modeling of Complex Structures for the Analysis of Radiation, Scattering and EMC Problems	NSERC	(EXT) 02
	SEE TRUEMAN, C.		
LE-NGOC, T.	Efficient Digital Point-to-Multipoint Communications Systems	NSERC	(EXT) 02
	Efficient Modulation, Coding and Multiple-Access Techniques (Elhakeem, A.)	FCAR	(EXT) 02
	Design and Implementation of Versatile Reed-Solomon Encoders/Decoders (CODECS)	BICOM	(EXT) 02
	Personal Wireless Communications (STRATEGIC GROUP) (Bhargava, V., Univ of Victoria)	NSERC	(EXT) 02
LINDSAY, J.	Nouvelles approches à la conception des convertisseurs de puissance appliqués aux entraînements électriques (Joos, G., Ziogas, P.)	FCAR	(EXT) 02
	Improved Variable - peed Drive Systems Based on Induction, Permanent Magnet and Switched Reluctance Motors	NSERC	(EXT) 02
	SEE ZIOGAS, P.		
LOSIER, R.	GaAs and Semimagnetic Semiconductors	NSERC	(EXT) 02
	Détecteurs infra-rouge extrinsèque de SI GaAs (COOPERATION FRANCE-QUEBEC)	MRIAI	(EXT) 02
	Clarification of the Thermal Stability Problems in Gallium Arsenide Devices	ANOCC	(EXT) 02
MEHMET-ALI, M.	Performance Analysis of Broadband ISDN with Implementations in Neural Networks	NSERC	(EXT) 02
	SEE HAYES, J.		
PAKNYS, R.	Antenna Interaction on Complex Structures at High Frequencies	FRDP	(INT) 02
	Extensions to GTD Modeling for Mutual Coupling Analysis of Aircraft Antennas	NSERC	(EXT) 02

PARNYS, R.	SEE RUBINA, S.		
	SEE TRUEMAN, C.		
PATEL, R.	Kinematics and Dynamics of Robot Manipulators	NSERC	(INT) 02
	Simulation, Control and Planning in Robotics (NETWORK OF CENTRES OF EXCELLENCE)	NSERC MESS	(EXT) 02 (EXT) 02
	Numerical and Computational Issues in Robotics and Control	NSERC	(EXT) 02
	Electrical and Computer Engineering Robotics Research Facility (INFRASTRUCTURE) (Al-Khalili, A.)	NSERC	(EXT) 20
	Design, Manufacture, Interfacing and Control of a Kinematically Isotropic Redundant Manipulator (Angeles, J., McGill)	NSERC	(EXT) 02
	SEE KHORASANI, K.		
PLOTKIN, E.	Studies in Structural Signal Processing	NSERC	(EXT) 02
	SEE SWAMY, M.N.S.		
RAMACHANDRAN, V.	Multivariable Networks with Applications in Two-Dimensional Digital Filter Design	NSERC	(INT) 02
	A Study of Multivariable Networks with Applications to Two-Dimensional Digital Filtering	NSERC	(EXT) 02
REZA, F.	Operator Theoretic Foundations of Circuit and Systems Optimization	NSERC	(EXT) 02
SARIKAYA, B.	TTCN to HTL Translator to Function Within Contest TTCN Tool Set	IDAC	(EXT) 02
	Research on Protocol Specification, Validation and Performance	NSERC	(EXT) 02
	SEE HAYES, J.		
SCHWEER, O.	Wave Propagation in Integrated Surface Wave Devices	NSERC	(EXT) 02
SOOD, V.	Force-Commutated HVDC Inverters and AC Filter Design	NSERC	(EXT) 02
SWAMY, M.N.S.	Studies on Electrical Networks and Signal Processing	NSERC	(EXT) 02
	Development of Algorithms and Architectures for Digital Signal and Image Processing with Applications (Ahmad, M., Krolik, J., Plotkin, E.)	FCAR	(EXT) 02
	Graph Theoretic Applications	NSERC	(INT) 02
	Multidimensional Filters (NETWORK OF CENTRES OF EXCELLENCE)	NSERC MESS	(EXT) 02 (EXT) 02
THULASIRAMAN, K.	Design and Performance Evaluation of Distributed Algorithms for Network Optimization Problems (COOPERATIVE R&D GRANT WITH BELL-NORTHERN RESEARCH)	NSERC	(EXT) 02
	Parallel Algorithms for VLSI Layout, Diagnosability and Diagnosis of Multiprocessor Systems, Fault-Tolerant Network Design	NSERC	(EXT) 02

	Project Title	Agency	Type
TRUEMAN, C.	Core Computer Upgrade for the Concordia Electromagnetic Compatibility Laboratory (Kubina, S., Paknys, R.)	NSERC DEC	(EXT) 03 (EXT) 03
	Computer-aided Antenna Analysis - Methodology and Applications	NSERC	(EXT) 02
	SEE KUBINA, S.		
ZEKGAS, P.	Next Generation Switch Mode Solid State Power Supplies	NSERC	(EXT) 02
	Frequency Response Analysis System (Jones, G., Lindsay, J.)	NSERC	(EXT) 03
	Development of an Advanced Variable Frequency High Voltage Solid State Power Supply (COOPERATIVE R&D GRANT WITH INVERPOWER)	NSERC	(EXT) 20
	An Investigation of High Input Voltage SMR Technology	NORTEL	(EXT) 01
	SEE LINDSAY, J.		

Mechanical Engineering

AHMED, A.	Dynamics of Mechanical Systems with Special Emphasis on Guided and Non-Guided Vehicles	NSERC	(EXT) 02
	SEE SANKAR, S.		
	Development of Software for Design and Assessment of Power Plant Structures	NORTEL	(EXT) 01
BESHAY, A.	SEE HOA, S.		
BHAT, R.	Dynamics of Rotors Supported on Fluid Film Bearings	CASA	(INT) 02
	1) Structural Dynamics & Optimization with Probabilistic Design Methods Under Acoustic and Mechanical Excitations 2) Problems in Rotor Dynamics	NSERC	(EXT) 02
	SEE OSMAN, M.		
BLACH, A.	Stress Analysis and Methods of Design for Pressure Vessel Components	NSERC	(EXT) 02
	SEE HOA, S.		
BULGAK, A.	Models for Design and Quality/Productivity Improvement of Flexible Assembly Systems	NSERC	(EXT) 02
CHENG, R.	Microprocessor Control of Mechanical Systems (Hemami, A., Krepec, T., Lequoc, S., Svoboda, J.)	FCAR	(EXT) 02
	Applied Research In Fluid Control and Automation	NSERC	(EXT) 02
DUKKIPATI, R.	Research in Mechanical Systems with Special Emphasis on Dynamics of Guided Vehicle Systems	NSERC	(EXT) 02
FABRIKANT, V.	Studies in Solid Mechanics with Application to Contact and Crack Problems	NSERC	(EXT) 02
GOUW, G.	Research In Human Factor Engineering	NSERC	(EXT) 02
HABASHI, W.	Large Scale CFD Technology on Vector and Parallel Supercomputers	NSERC	(EXT) 02

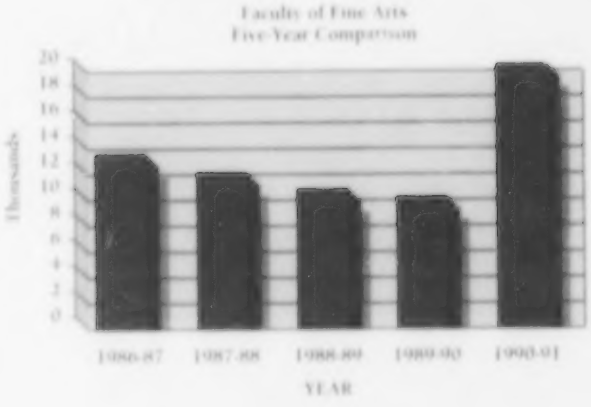
HABASHI, W.	Computational Fluid Dynamics of the 3-D Euler and Navier-Stokes Equations by the Finite Element Method	NSERC	(EXT) 02
SEE BUI, T.	(Computer Science)		
HEMAMI, A.	Dynamic Analysis of Robotic Systems	NSERC	(INT) 02
	Synthesis of an Efficient and Sophisticated Controller for a Human-Arm-Like Redundant Mechanical Arm	NSERC	(EXT) 02
	SEE CHENG, R.		
HOA, S.	A Thermographic System for Non-Destructive Testing of Composites (Blach, A., Lin, S., McQueen, H., Thimmhardy, E.)	NSERC	(EXT) 03
	Vibration and Stress Analysis of Elastic and Viscoelastic Systems Under Various Loads and Environments	NSERC	(EXT) 02
	Mecanique des materiaux composites polymeriques et des structures faites avec les materiaux composites polymeriques (Beshay, A., Blach, A., Lin, S., Thimmhardy, E.)	FCAR	(EXT) 02
	Upgrade of 2-axis Filament Winder to 4-axis Control for Ultra-High Pressure Composite Pressure Vessel Construction (Krepec, T.)	NSERC	(EXT) 03
	A Study on the Effects of Repair Processing Variables on Mechanical Properties of Thermoplastic Composites	CDND	(EXT) 01
	Acoustic Emission Testing of Fiber Reinforced Plastic Highway Tankers	CDOT	(EXT) 01
	To Conduct Biaxial Bearing/Bypass Testing of Single Belt Joint Graphite/Epoxy Composite Laminate	CDND	(EXT) 01
KRAKOW, K.	Data Logging System for Energy Conversion Systems	NSERC	(EXT) 03
	Energy Conversion Systems Utilizing Refrigeration Cycles	NSERC	(EXT) 02
KREPEC, T.	SAE Natural Gas Vehicle Challenge	CGA GAZM	(EXT) 02 (EXT) 02
	Research on New Concepts of Electronic Fuel Control Systems for Combustion Engines	NSERC	(EXT) 02
	Research and Development of New Concepts for On Board Storage Direct Injection and Ignition of Gaseous Fuels in Automotive Combustion Engines	BUNDA	(EXT) 01
	SEE CHENG, R.		
	SEE HOA, S.		
LATINOVIC, V.	Optimal Multi-Edge BEA Tools	NSERC	(EXT) 02
	SEE OSMAN, M.		
LEQUOC, S.	SEE CHENG, R.		

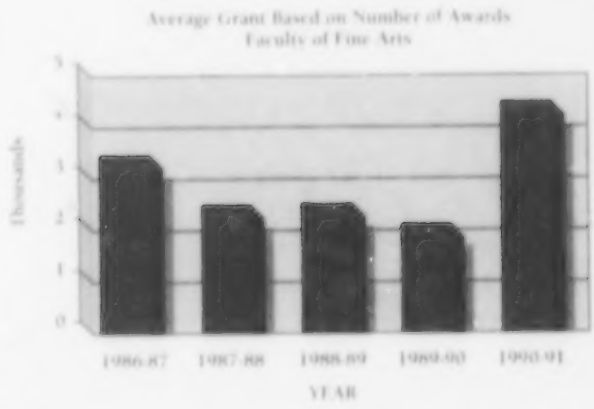
	Project Title	Agency	Type
LIN, S.	Transport Phenomena and their Applications	NSERC	(EXT) 02
	An Investigation of Numerical Simulation for Cooling Cellphone Power Units	NORTEL	(EXT) 01
	SEE HUA, S.		
McQUEEN, H.	Hot Working Characteristics Constitutive Expressions and Rolling Schedule Simulation of Single Phase and Precipitate Bearing Alloys	NSERC	(EXT) 02
	Application de l'etude du controuage à l'amelioration des alliages commerciaux (Jonas, J., McGill)	FCAR	(EXT) 02
	SEE HUA, S.		
NEEMUH, R.	Stability of Converging Shock Waves Aerodynamic Resonators - Ignition by Oscillating Shock Waves	NSERC	(EXT) 02
OSMAN, M.	Robotics Applications in Manufacturing Systems	CASA	(INT) 02
	Dynamics of Mechanical Systems in Manufacturing	NSERC	(EXT) 02
	Recherche sur les systèmes mécaniques 1) Synthese de mecanismes pour le profilage de surfaces 2) Reponse de systemes mecaniques soumis a des perturbations deterministes et aleatoires (Bhat, R., Laroviere, Y., Sankar, T.S., Vatistas, G., Xistris, G.)	FCAR	(EXT) 02
RAKHEJA, S.	Study of Liquid Tanker Stability	NSERC	(INT) 02
	Computer-aided Design and Analysis of Mechanical Systems with Special Reference to Ground Vehicles	NSERC	(EXT) 02
	Conception et analyse dynamique des systemes et sous-systemes de vehicules	FCAR	(EXT) 02
	SEE SANKAR, S.		
ROBBINS, S.	Behavioural Impact Moderation - Plantar Sensors Mediated	NSERC	(EXT) 02
SAIER, A.J.	Starting Submerged Gas Jets	NSERC	(EXT) 02
	SEE LANGFORD, C. (Chemistry)		
SANKAR, S.	Etude de vibration sur un siège ISRI HANGSEN d'un camion de marque international d'Hydro-Quebec	HQ	(EXT) 02
	Ride Quality Evaluation of M113 Armoured Personnel Carrier	CDND	(EXT) 01
	Analytical Model for the Evaluation of Active and Semi-Active Suspensions for M113 Armoured Personnel Carrier	CDND	(EXT) 01
	Measurement of Impulse Force Produced by an EHD Coil	BELLH	(EXT) 02
	Vehicle Structural Analysis	NSERC	(INT) 02
	Vibration of Packaged Rectifier and Power Bar	NORTEL	(EXT) 02
	Research on Vehicle System Dynamics and Design (Ahmed, A.K.W., Rakheja, S.)	FCAR	(EXT) 02
	Seismic Qualification of Electronic Product	NORTEL	(EXT) 02

SANKAR, S.	Etude des essieux orientables pour véhicules articulés lourds et evaluation de leur manoeuvrabilite et stabilite directionnelle (ACTION CONCERTEE SUR LES TRANSPORT DES MARCHANDISES)	FCAR	(EXT) 02
	A Technical Proposal on the Development of a Program for Evaluating Secur s Armoured Truck for Ride and Stability Performance	ANOLC	(EXT) 02
	1) Computer Aided Optimal Design of Mechanical Systems 2) Vibration of Continuous Mechanical Systems: Optimization and Control	NSERC	(EXT) 02
	Vibration Characterization of Hydro-Quebec Utility Vehicles	HQ	(EXT) 02
	Vibration of Rear Suspension Sub-Frame	PRCAR	(EXT) 02
SANKAR, T.S.	Teleoperators: Dynamics and Control - Fault Detection (NETWORK OF CENTRES OF EXCELLENCE)	NSERC MEVS	(EXT) 02 (EXT) 02
	Methanol Fueled Corvair	ANGNC	(EXT) 02
	Dynamic Analysis of Robotic Systems	CASA	(INT) 02
	Dynamic Response and Reliability of Mechanical Systems under Deterministic and Stochastic Forces	NSERC	(EXT) 02
	SEE OSMAN, M.		
SCHUDA, J.	Development of Driving Simulator Enhancement and Performance Assessment Module	CDOT	(EXT) 01
	Investigation of Non-Return Valves for Fluid Handling	RITE	(EXT) 01
	SEE CHENG, R.		
SHAMSHARDY, F.	Ultimate Strength of Steel Box Girder Bridges/ Bridge Strengthening using Advanced Composite Materials	NSERC	(EXT) 02
	Basalt Flexible Reinforcement with Accessories	NSERC	(EXT) 01
	SEE DUTTA, S.		
SYTNIAS, G.	Automobile Antitheft Marker Using an Air-Sand Jet	FCAR	(EXT) 01
	Vortex Flows with Applications	NSERC	(EXT) 02
	The Dynamic Behaviour of Liquids in Space	FCAR	(EXT) 02
	Micro-Gravity Fluid Dynamics for Aerospace Applications	CASA	(INT) 02
	SEE OSMAN, M.		
TEEES, G.	Reliability of Mechanical Systems and Components Through Fatigue Damage Estimates	NSERC	(EXT) 02
	SEE OSMAN, M.		

The Faculty of Fine Arts has gained its excellent reputation in the Canadian context because of the quality of its teaching and research. Research is diverse with frequently unorthodox sources of funding relative to other faculties at the university. Because of the artist's commitment to creativity and its concomitant ambiguities, the artist is obliged to devote a good part of their resources and energy to sustain important research which has no obvious utilitarian function.

The Directory of Funded Research Activities 1990-91 for the Faculty of Fine Arts represents a small portion of the Faculty's contributions to new knowledge in the arts and cultural milieu. The major part of the funded research, however does not appear in the Directory, since the financial support is given directly to the individual artist or group whose research activity takes place outside the university space. Grants are available from the Canada Council, the Ministere des affaires culturelles, Conseil des Arts de la Communaute Urbaine de Montreal, Telefilm Canada, La societe generale des industries culturelles, to name a few. Educators, historians and theorists often serve as guest curators and are funded by the museum or gallery itself. The private sector has also provided considerable financial support for films, compact discs, commissions and purchase of works of art. Notable funding for research activities in 1990-91 include the production of Shimon Dotan's film "The Forest Hour" which had a budget of 7 million dollars, and the Studio de Musique Ancienne de Montreal, conducted by Christopher Jackson, which receives annual grants of $255,000.





On a smaller scale, but more frequently, artists receive funding for exhibitions, concerts, dance and theatre productions from the appropriate venue. This "invisible" funding, which rarely shows up in directories or reports, can be substantial when in situ production, travel outside of Canada, transportation of works of art or the artists themselves, and honorariums are considered.

Members of the full-time faculty are art historians, film scholars, art educators, art therapists, photographers, printmakers, sculptors, ceramic and fibre artists, painters, filmmakers, design artists, dancers, choreographers, musicians, conductors, theatre educators, stage and costume and lighting designers, actors and directors. Their scholarly and creative activity includes the preparation and dissemination of original work for group and solo exhibitions in galleries and museums, film festivals, dance productions, theatre productions, concerts, scholarly journals, texts, and art magazines.

FACULTY OF FINE ARTS

Art Education & Art Therapy

	Project Title	Agency	Date
SHERMAN, I.	Interdisciplinary Research in Art Education	CASA	(INT) 02

Art Galleries

PAIKOWSKY, S.	Susanna Heller: Recent Painting/Oeuvres récentes	CC	(EXT) 02

Art History

PAIKOWSKY, S.	Journal of Canadian Art History	FCAR SSHRC	(EXT) 20 (EXT) 20
	Study of the Still Life and Interiors Paintings of Goodridge Roberts	CASA	(INT) 02
SANDERSON, W.	Photos of 9th Century Frescoes and Illuminated Scripts	CASA	(INT) 02

Cinema

FALSETTO, M.	Studies in Contemporary Film Directors	FRDP	(INT) 02
REST, F.	South: A Critical Filmographic of 200 Feature Films of Central America and the Caribbean Islands	SSHRC	(INT) 02
	Videotapes of Hungarian Cinematographers	CASA	(INT) 02
WAUGH, T.	Imagining an Audience: Gay Male Pornographic Film and Photographic, 1920-1940	SSHRC	(INT) 20
	Hard to Imagine: Gay Male Eroticism in Film and Photography, 1930-1969	CC	(EXT) 02
ZUCKER, C.	Oral Histories and Essays: Contemporary American Film Acting	FRDP	(INT) 02

Design

O'BRIEN, K.	Completion of a Large Format Photo-Sculpture Installation	CASA	(INT) 02
WOLLENSAK, A.	Site-specific Perceptual installation	CASA	(INT) 02

Music

ADAMS, J.	Flying to the Moon: Schoenberg's Pierrot Lunaire (Transition 1)	FRDP	(INT) 02
AUSTIN, K.	Electroacoustic Music	CASA	(INT) 02
COHEN, P.	SEE SEGALOWITZ, S. (Psychology)		
FRIEDLAND, S.	Project Costs in Producing a CD	CASA	(INT) 02
PANNETON, J.	SEE ADAMS, J.		

	Project Director	Project Title	Source	Type
Painting & Drawing				
	MILLER, J.	Presentation of Three New Multi-Media Works	CASA	(INT) 02
	WAINIO, C.	Two Extended Format / Scenography Works	CASA	(INT) 02
Printmaking & Photography				
	TWEEDIE, K.	A Public Inquiry into the Matter of Surrogate Motherhood	SEAG	(INT) 01
Sculpture, Ceramics & Fibres				
	DUTRIEWICH, A.	Casting Bronze in Ceramic Shell	CASA	(INT) 02
	GOULD, T.	Preliminary Research for Sculpture Exhibition in Warsaw	SSHRC	(INT) 20
	JUBICH, D.	To Produce Seven New Wearable Sculptures	CASA	(INT) 02
	LAYNE, R.	To Develop a Textile Programme at the Lascaleches in Haiti and to Document the Evolution of Textile Products over time in Haiti	SSHRC	(INT) 20
	LIPKE, K.	SLEEPY, A. (Marketing)		
Theatre				
	ALLNOTT, R.	Confidences - A New Creation	ANOFC	(EXT) 02
	GIBBONS, G.	Gender Pay Equity for Theatrical Designers in Canada	FRDP	(INT) 02
	HARRIS, R.	Integration Through the Theatre Arts: Research and Development of a Summer Institute at Concordia University	SEAG FRDP	(INT) 02 (INT) 03
		SESD: A Theatre Company Integrating Disabled and Nondisabled Performers	ANOFC	(EXT) 02
		Visiting Artists in Schools - Bell Arnaux, etc.	PSRGM	(EXT) 02